MAPPING LAHORE

Tracing Historical Geography of a City Through Maps

Dr. Abdul Rehman

الميزان

Mapping Lahore:

Tracing Historical Geography of a City Through Maps

Abdul Rehman
University of Engineering & Technology, Lahore

10400

A Publication of
Habib ur Rehman Research Foundation

AL-MEZAAN
Publishers and Book Sellers
Al-Karim Market, Urdu Bazar, Lahore-Pakistan

DATA ENTERED

Copyright © 2013 Habib ur Rehman Research Foundation
139-S-103, Ittehad Colony, Ichhra, Lahore-Pakistan.
All Rights Reserved.
No part of this publication may be
reproduced, stored in a retrieval system, or
transmitted, in any form or by any means (electronic,
mechanical, photocopying, recording or otherwise) without
the prior written permission of the Publisher.

Mapping Lahore: Tracing Historical Geography of a City Through Maps

Rehman Abdul

ISBN: 978-969-624-000-6

Layout by Amir Sohail
www.amirsohail.com

First Published 2013 by
Al-Mezaan Publishers
Al-Karim Market, Urdu Bazar,
Lahore-Pakistan
+92 42 37122981, 37212762

Dedicated to my teachers

Kamil Khan Mumtaz, Tanvir Hussain, Masood Ahmad Khan,
Javed Najam and Abdur Rehman Khan

Table of Contents

Foreword vi

Introduction vii

Chapter 1
Approaching the City of Gardens: Historic Routes to Lahore 9

Chapter 2
History and Spatial Growth of Lahore 19

Chapter 3
Geographical and Traveler's Map of Lahore Suba, District and Grand Trunk Road 33

Chapter 4
Early Maps of Lahore 55

Chapter 5
Detailed Maps of Lahore 89

Chapter 6
Planning and Development Maps of Lahore 199

Conclusion 231

Glossary 243

Bibliography 245

Map Credits 249

Index 250

Foreword

By James L. Wescoat Jr., MIT

There are few more engaging activities than studying the historical maps of a city like Lahore — retracing the Ravi River terrace, its Grand Trunk Road alignments, surviving gardens, irrigation channels, monuments and toponyms of earlier times. Lahore's small mazars and larger funerary sites are among its more enduring cartographic features, leading one to reflect upon the processes of life and death in the City. Older neighborhood names such as Gwalmandi, Begumpura, Badamibagh, Urdu Bazaar, and so many others that appear on these maps evoke the vibrant sounds, aromas, and social life for all who have ever visited Lahore. One day, suburban Gulberg will have such historical resonance as modern Model Town, so distinctive on Lahore's maps, already does in less than a century after its development.

Dr. Abdul Rehman has performed a great service for students, residents, and scholars of Lahore. The collection of historical maps that he has compiled and curated here enables all of us to study the City through time with new resources. We can compare Lahore's spatial layout before and after construction of the railway that cut through Shahdara crossing the Ravi north of the Walled City and dividing its northern and southern suburbs. In a recent conversation a colleague from Pakistan wondered, might the railroad someday be realigned allowing the reconstruction of Nur Jahan's tomb-garden? In more recent maps, we can discern how the railroad has itself become an historical transportation system, as the metropolitan region extends out to the new airport in the east, along Multan Road to the south, toward Sheikhupura Fort and the Hiran Minar of Jahangiri fame in the west, and even toward the border-crossing at Wagah in the northeast. The canal that once watered Lahore's eastern fields and institutional grounds became an urban amenity lined by increasingly elaborate roadways, no longer streets where one could just stop the car to buy jaman fruit. These maps enable us to discern Lahore's historical expansions and contractions – and to imagine its many possible futures.

This collection of maps takes Lahore up to the near present which is unusual in a collection of historical maps. As director of a School of Architecture and Design, Dr. Rehman appreciates the enormous practical value of maps for urban planning and design, and the historical character of planning maps that strove to envision and guide the future when they were first made, but themselves became artifacts with the passage of time. It is fascinating to study what these maps and their mapmakers did, and did not, foresee. One thing we did not foresee a generation ago was the GIS and Google Earth satellite mapping revolution and no doubt someday those maps will also take their place in an historical atlas.

Dr. Rehman is a life-long student of historical Lahore, the settlements of Punjab, and Pakistan more widely. He has devoted himself to original field research at many of the sites depicted in these maps, documenting their current forms and conditions, warmly engaging local residents in most of Lahore's neighborhoods in discussions of the historical architecture they live with, its lore and local meanings, often including students and colleagues in projects that deepen their understanding of the urban landscape. He thus shares these maps with us as someone who has "ground-truth" as well as cartographic knowledge. It is thus a collection to be prized and consulted by all who care about the biography of Lahore from its rich history and wider geography to its vibrant local places, past and present, some of them lost to memory, others fully realized, and still others yet to reach their full flowering. Every city should have such an atlas.

Introduction

The study of urban historical geography is comparatively a new subject in Pakistan in general and Lahore in particular. Being located on Grand Trunk Road, the city has absorbed influences from incoming invaders, travelers and migrants. These influences have transformed themselves into a mix of cultures, traditions as well as monuments to suit a variety of socio-cultural needs.

Lahore remained one of the greatest cities of the Mughal Empire. With the advent of colonialism, the city expanded beyond the city wall in the eastern, southeastern and southern sides of the town. The British developed a completely new town among the gardens and suburbs of the Mughal city. After independence, Lahore has grown in every direction: left, right and centre. Today, Lahore presents a tale of three cities, but the spatial growth of Lahore and different urban as well housing patterns beyond the city wall have not been studied adequately. This is primarily because the study of urban historical geography is not a well-established subject in South Asia. Urban historians have concentrated all their efforts on textual evidence concerning the broad scale of political economy and culture of colonial urbanism. Archaeologists have focused on individual sites paying little attention to urban and regional contexts. Historians of cartography have identified a few 18th century city maps which provide highly stylized representation of the city but are lacking in detailed morphological analysis. Architects have paid more attention to the study of architectural monuments than looking into a broader geographical context. For example, "Imperial Delhi" by Andreas Volwahsen provided beautiful original drawings of Sir Edwin Lutyens and other architects, but it contained only a few historic maps. In short, very little effort has been made to study colonial textual documents and cartographic information together.

There has been little work on the compilation of historical maps of South Asian cities although the practice of preparing city route maps has existed since the Mughal period. Susan Gole collected over 200 maps covering pilgrim towns, route maps of highways, military plans and topographical maps of provinces and published them in 1983 under the title "Indian Maps and Plans: From the earliest times to the advent of European surveys." This is the only publication which provides pre-colonial maps and sketches of Indian cities and routes touching the Indian cities.

As regards geographical maps, the earliest comprehensive work was done by Joseph Gentile. He prepared maps of Mughal provinces on the basis of information drawn from *Ain-e Akbari.* His work was published by Susan Gole in 1998 under the title "Maps of Mughal India." Professor Irfan Habib has taken a step forward to draw political, geographical and economical maps of Mughal provinces. He has gleaned all his information from primary Mughal sources. The atlas gives a clear picture of provincial headquarters such as Lahore in terms of its economy, extent and political situation. Joseph E Schwartzberg has compiled "Historical Atlas of South Asia." This atlas gives a definitive chronology of the South Asian region from prehistoric times through the present. The atlas is divided into two main sections: maps and photographs, and historical texts corresponding to and explaining the maps. Professor Schwartzberg started this work in 1964, and with the help of a number of historians, cartographers, and researchers compiled a complex history of South Asia and published this book in 1978. The book also contains a few modern city maps including the city of Lahore.

During the British period, a large number of city maps were prepared by Survey of India. During the same time, military engineers also prepared maps for security reasons. The chronological compilation of historic maps of towns is rare in south Asia in general and Pakistan in particular. None of the publications provide a detailed compilation of historic maps of urban centers. The Indian cities face a similar situation. The only publication "The Dual City: Karachi during the Raj" gives a comprehensive history of Colonial Karachi illustrated with a few historic maps. A large number of historic maps of Lahore were prepared during British rule, but they are gathering dust in the libraries, archives and private collections.

This particular research is an effort to collect historic maps of Lahore and publish them for the wider interest of a broad range of user groups. Significant architectural/planning activity that took place between the time span of two consecutive maps has also been covered. This information has been drawn from administrative reports of the Punjab Government and Lahore Improvement Trust as well as diaries written by British officers. The book is divided into four parts. The first part provides geographical maps of Lahore Suba, district and traveler's sketches; the second part contains early maps of Lahore. The detailed maps of Lahore are given in the third part; and finally the last part gives the physical growth and development planning maps.

Several individuals and organizations helped me generously by sharing maps and information on Lahore. First of all, I would like to thank my friend and colleague Prof. James L Wescoat Jr., Aga Khan professor at MIT, who stressed the need for a comprehensive book on Lahore. This book is a first step towards that direction. Prof. Wescoat not only shared his ideas but provided help in the form of textual material wherever I needed it. I am also grateful Urban Unit, Govt. of the Punjab especially to Dr. Nasir Javed for sharing maps in their collection. Prof. Sajida Vandal, Prof. Faisal Sajjad, architect Nayyar Ali Dada, Prof. Muhammad Arif Khan and engineer Talib Hussain also shared soft and hard copies of maps in their collection. I am grateful to Rida Tariq and Mr. Haroon Rashid, senior journalist, for doing a mammoth job of editing this book. I appreciate their efforts. Finally I would like to thank Lt. General (Rtd.) Muhammad Akram Khan, The Vice Chancellor University of Engineering & Technology, Lahore for his generous support, encouragement and help in undertaking this project.

Punjab Archives, Government of Punjab, was especially generous in providing maps in their collection and allowing consulting administrative reports from their library. Finally I would like to acknowledge the help provided by National Library, Canberra, and British Library to use 1845 and Gentile map of Punjab in their collection.

Approaching the City of Gardens: Historic Routes to Lahore

Lahore-Sheikhupura historic trade route

Lahore was connected with other regions by a number of highways. The most important among them was Grand Trunk Road that connected Lahore with Delhi and Agra in the east while Kashmir, Kabul and areas beyond in the north and northwest. Along Grand Trunk Road marched not only mighty armies of conquerors, but also caravans of traders, scholars, artists and ordinary folk. Together with people, moved ideas, language, customs and cultures not just in one but in both directions. At different meeting places – permanent as well as temporary – people of different origins and from different cultural backgrounds, professing, different faiths and creed, wearing different clothes and speaking different languages and dialects met one another peacefully. This brought about cultural, ideological and material change in society.

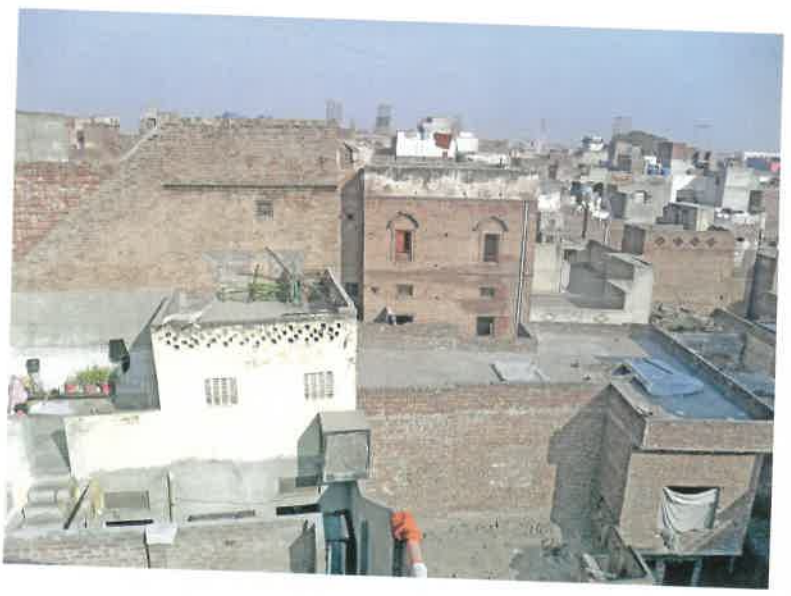
The glimpses of richness of visual culture, including architecture, of a city became apparent in the nature and variety of activities taking place in its suburbs and the highways leading to it. The suburban settlements of medieval cities hosted a variety of socio-cultural activities and therefore, on these grounds, contributed towards the building image of the cities. In the context of the subcontinent alone, the highways were furnished with a variety of infrastructure at convenient distances. These highways were frequented with traders and travelers and therefore a number of settlements emerged along them during the ancient times (Rehman, 1997a: 154-155). These settlements had their own strong functional character tied to the cities. Thus, some of the activities which took place in them are considered part of the main cities. Lahore, which was a multi-religious city, had a variety of building types in its suburban settlements. During the Mughal period, pleasure gardens, garden retreats, tombs and temples were built along them (Geddes, 1966:35, Rehman, 1997b:161-79). These gardens were planted with a variety of fruit and shade trees. The description of Lahore by early colonial period travelers indicates that the south and east of town had a large number of monuments and gardens surrounded by trees. This chapter discusses the architectural and landscape character of Mughal highways and a variety of settlements leading to Lahore.

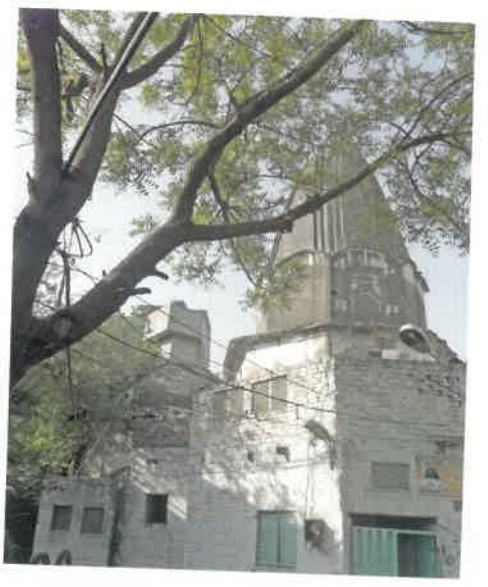
Tomb of Shah Kamal Chishti, Ferozepur Road, Kasur

Gurudwara Dastu near Luliani

Skyline of historic settlement of Ichhra (left)

Mandar Bheristan (right)





Ferozepur Road

Ferozepur Road was an important route linking Lahore with Ferozepur. The land was flat with very little variation. It was crossed by the River Sutlej near Kasur and occasional nullahs (perennial streams). All along the route there were large and small settlements. The land in between the settlements was cultivated with a variety of grains. From distance the townscape seemed very rich. The settlements were located on high mounds and were spread over a large area. The more high the settlement was, the more ancient it was. The new settlements were small in size and formed a relatively uniform skyline. Outside the settlements were most often located graveyards, temples, water reservoirs and wells, and tombs. An array of activities would take place here which made these settlements lively and attractive for the travelers passing by. The land along the road was *chahi,* partly cultivated and irrigated with water drawn from wells. The traffic along this road was relatively little but even then infrastructure had been developed along it.

Ichhra and Mozang

Ichhra was the oldest and largest settlement outside the Walled City. It was enclosed by gates placed at the beginning of every street. Traces of such gates can still be seen in the streets facing the western side. The settlement rested on a high mound. The highest place used to be a fort and the area is still remembered as a *Qila* or fort. According to one tradition, this area was the real Lahore and therefore, on these grounds, Lahori or Lohari Gate of the Walled City of Lahore is named after it (Thronton, 1873:3). Ichhra has remained an important place throughout history, attracting many saints and scholars who settled in the area. A number of shrines located outside Ichhra are an attestation to this very fact. During the reign of Shah Jahan, Hazrat Shah Jamal, a Sufi saint of *Qadri silsila*, settled east of Ichhra on a spot where his shrine is now located (Chishti, 1993: 896).

While traveling on Ferozepur Road, the old settlement of Ichhra was dominated by generally three-storied houses, built with burnt bricks. A large graveyard located on the northern side shows the antiquity of the settlement. Further north, the temple of *Bhairon ka Than* or the "seat of goddess Bhairon" with a large tank used to be an important place of worship for the Hindus (Latif, 1892:101,199). As tradition relates, Moran, the mistress of Mahraja Ranjit Singh, had been affected by the shadow of a demon, or evil spirit. Jawala Nath, the *mahant* of a sacred *mandir*, and the successor of Vasti Ram, worked an incantation (charm) upon her, and she was cured. She supplied the Mahant with a hundred cartloads of bricks and money, which enabled him to build many beautiful chambers and rooms around it. The temple with its large gateway was initially built by Ram Chand, brother of Sawan Mal, the Nazim of Multan. Traces of the *mandir* exist to this day. The complex used to contain a *langar khana*, or alms house, rooms for *pujaris*, cells for *fakirs*, houses for the *Mahant*, houses for grinding corns, and other miscellaneous buildings. Today, a shopping plaza has been constructed over the tank and various structures have been taken up by families who migrated from India.

Before independence, large fairs were held at Shah Jamal and Bherastan where the Muslims and Hindus would come from far-flung areas. Ichhra is also the resting place of two important personalities of recent times: Syed Abul Ala Maududi, a great philosopher of Islam and author of *Tafhim ul Quran,* and Allama Anayat ullah Mashraqi, a great leader and founder of *Khaksar Tehrik*, a scholar and an academician, who also lived there and was buried in Ichhra.

Close to the *mandir* was located *Golianwali Sarai* built during the Jahangir period (Latif, 1892:200). Three shrines adjacent to the present Camp Jail show the historic importance of this site. The shrine of Naugaza Pir, located within the prison premises, is said to be of the companion of Holy Prophet (SAW). The shrines of Syed Dushnadi and Syed Qamar Ali are also located in the vicinity.

From Bherastan at a distance of about two kilometers lies the settlement of Mozang which got its name after Pir Mozang. The settlement was dominated largely by Muslim population. Here, Sardar Khan (a lamberdar of the area) built one of the largest mosques in the area (Aijazuddin, 1991: 155). Unfortunately, it no longer exists. Numerous Muslim shrines such as those of

An old colonial period building in Mozang (left)

Masjid Takia Nur Shah in Mozang (right)

Baha ud Din Jholan (d.16 November, 1594), Baba Abdullah Shah (d.28 October, 1797) and Takia Nur Shah are located in the Mozang area.

Multan Road

Thokar Niaz Beg is located six miles southwest of Lahore on Multan Road. The most important feature of this settlement was a small temple of Bhadar Kali where an image of the *Devi* was once placed (Latif, 1892:198). Later, Hindu devotees built a larger temple having a square chamber resting on a high platform and surmounted by a ribbed dome (Latif, 1892:24). The modern structure was built during the Sikh period. Legend has it that the devotees wanted to shift the image of the deity to a new location but she refused to go there. The devotees saw her in a dream, saying that she was very comfortable and the votaries need not trouble themselves to provide her with another home which would not suit her. Her order was obeyed and she was kept where she was and in this way the old structure remained intact. Close to the temple, there used to be a *sarai* and *baoli* which served devotees and pilgrims coming from far-flung areas. On the northeastern side of the temple lies a large tank. Architecturally speaking, it is the finest Hindu complex in Lahore. On the northern, eastern and western sides, fine buildings were planned in the middle of each side of the tank. Two small shrines also lie on the southern side. According to sources, the fair of Bhadar Kali was the largest in Lahore (Latif, 1892:10, 99). The tank and surrounding buildings have been left to stand derelict. If restored to their original state, these buildings can become one of the finest monuments of Lahore.

Kali Ka Mandir & Tank in Thokar Niaz Baig (left)

Kali Ka Mandir (center)

Entrance gateway of *Kali Ka Mandir* (right)

To the north of Thokar Niaz Beg lies Hanjarwal. The shrine of Pir Hanjar is situated in the middle of a graveyard. Several small tombs lie scattered around it. The tomb is said to have been built during the Sultanate period (DOA, 1993:104-106). Moving further north and crossing an insignificant small settlement of Said Pur, one reaches Nawan Kot, a settlement of the Mughal period. This area once had a large garden that could be approached through a large gateway embellished with glazed tiles. The gateway and corner towers are now surrounded by houses. The gateway was embellished with floral decorations executed in *Kashi Kari*. The tomb of so called Zebun Nisa lies close to it. The monument was plastered both internally and externally. The interior of the tomb was decorated with fresco paintings (Chughtai, 1981: 217).

Shrine Complex of Hanjar Pir

On the way to the Walled City, there once existed a large ladies' garden. The early British period sketches indicate that the River Ravi used to flow on its western side. However, only a monumental gateway flanked by four-corner minarets survives today. According to the inscription on the gateway, it was built by Zebinda Begum. It was also finished with glazed tiles. The floral motifs, dishes and flower vases are important features of the gateway (Rehman, 1997a: 185). The garden was situated close to but west of Miani Sahib Graveyard which also separates it from Mozang.

Nawan Kot Gateway (left)

So-called tomb of Zaib un Nisa at Nawan Kot (right)

The area between Chauburji and Anarkali, a distance of about two miles, used to be an open space. At this point, Ferozepur Road and Multan Road came close together. The area around Anarkali remained a centre of intense Mughal architectural activity. Anarkali and adjoining areas used to have gardens, tombs and mosques in addition to the human settlements. Near the Lahore High Court there once lay Mohalla Langar Khan, the largest *Mohalla* outside the Walled City (Latif, 1892:93). Several shrines in the area belonging to the Mughal period testify to this fact. It was inhabited by various religious groups. The first structure which one confront while coming from Mozang and Chauburji was Jain Mandir, a temple comprising a square chamber with a towering *Shikara*. It was pulled down following the fall of Baburi Masjid. It was located in an island enclosed on three sides by a metalled road. Across the road on its western side lay the shrine of Muhammad Ismail Shah Bokhari (d. 23 January 1684 A.D). This protected monument under Antiquities Act was externally decorated with floral designs executed in *kashi kari*. On the eastern side, a series of old houses with *jharokas* and monumental entrances still preserve the historic architecture and traditional streetscape. From the old Jain Mandir (now Baburi Chowk), a road leads to the AG's Office where one can find two important shrines of the Mughal period. These are shrines of Mauj Darya (built 1591, now crammed with modern commercial buildings) and Shah Chiragh (d. 1567) and put to rest close to the Lahore High Court (Latif, 1892: 193-195). At the termination of old Anarkali, once existed one of the largest sub imperial Mughal gardens built by Hakim Ilm ud Din Wazir Khan (Rehman 1997a: 187, Latif, 1892:185, Chishti, 1993: 704). The garden had an elaborate water system comprising water tanks on the podium, water chutes and canals. An elegant double-storied *baradari* resting on a large podium still survives. The *baradari* was profusely decorated with *kalib kari*, *khat kashi* and fresco decorations. The garden was encroached upon by modern buildings during the British Colonial period and as a result the entire water system was dismantled.

Gateway of Chau burji Garden

Kashi Kari on the tomb of Muhammad Ismail Bokhari

The Grand Trunk Road

Routes from North

In historical times, two important routes connected Kabul and Kashmir with Lahore. One route was Grand Trunk Road linking Eminabad with Lahore and the other was the Sheikhupura-Lahore route. Both these routes meet near Shahdara before approaching the imperial Mughal monuments. These routes are discussed separately in the following paragraphs:

Approaching Lahore from Northern Side on Grand Trunk Road: The old Grand Trunk Road used to run about three kilometers east of the modern Grand Trunk Road. It had the entire infrastructure similar to that of a modern highway for the convenience of travelers. At regular distances were located *sarais*, mosques, *mandirs, baolis* and wells. The alignment of this route was fixed by Sher Shah Suri (Khan, 1871:181), but all Mughal emperors, in their times, contributed further towards the provision of infrastructure along it. For instance, on the orders of Emperor Jahangir

shade-giving trees were planted between Lahore and Attock (Jahangir, II 1974:100) while *baolis* were built on the orders of Akbar and Aurangzeb at several locations such as Dhonkal, Gujrat, Kharian, and Sarai Alamgir.

Eminabad was the first major town on the north before reaching Lahore. The land between the two towns is fertile and traversed by two *nullahs*, namely Nullah Bhed and Nullah Dek. Nullah Dek is most turbulent during rainy days. It originates from Jammu and passes through Sialkot and Sheikhupura districts before falling into the River Ravi. One of its branches used to irrigate the land around Eminabad. The Mughal highway was an all-season road. In order to make it so, road bridges were constructed over the *nullahs*.

Eminabad was visited by Guru Nanak in c.1521 on his journey to Sialkot. He stayed one night at a spot where *gurudwara* Rori Sahib stands now. There is a Lodhi period mosque and a large tank on the eastern side of the tomb. There were also a number of fine Sikh period walled gardens all around the town. Traces of the dilapidated walls are visible around the town even today. Close to the gurudwara, there is a Mughal period *baoli* built along the ancient Mughal highway.

While proceeding towards Lahore the next important settlement was Gunagor. The settlement was of ancient origin and rested on a high mound. It was only two miles away from Nullah Dek where Saint Shah Daula had constructed a bridge during the Shah Jahan period (Rehman, 1997:155, Elliot, 1902:19). From here, Nullah Dek continues straight and then turns southward and again crosses Grand Trunk Road. At this point, another Mughal period bridge still exists in good shape. Before arriving at Shahdara, there used to be a *kachi sarai* which no longer exists.

Mughal period bridge on Nala Dek near Kala Shah Kaku

Sheikhupura-Lahore Route:

This route was followed by Mughal emperors for their journeys to Kashmir and Kabul. The road was paved during Shah Jahan's time and bridges were built for the convenience of the travelers. Salih Kamboh, a historian of Shah Jahan, mentioned these bridges in connection with the emperor's journey from Kashmir to Lahore (Khan, 1990: 475). He writes:

> *"There were large, torrential rains this year and all the country between Lahore and Sheikhupura was heavily flooded; the bridges constructed recently became inundated, and therefore His Majesty decided to halt a few more days in Sheikhupura."*

Three bridges exist on the road built on Nullah Dek and Nullah Bhed, but are now in dilapidated condition, except the one at Kot Pindi Das. The bridge at Kot Pindi Das is one of the most impressive British rule structures and is still being used by heavy traffic. The first settlement after crossing Shahdara is Begum Kot. The settlement was full of date palm trees. The alignment of the old road got changed during the British period.

Dilapidated Mughal period bridge on Lahore-Sheikhupura Road (left)

Dilapidated Mughal period bridge on Lahore-Sheikhupura Road (right)

Approaching Lahore from E astern Side on Grand Trunk Road

The Grand Trunk Road leading to Lahore used to be frequented by traffic since it was the primary connection between Lahore, Delhi and Agra, the three most important cities of the Mughal Empire. Caravanserais, wells, *baolis* and mosques were built all along the road for the convenience of the travelers. A number of historic settlements flourished along it too, which provided food and fulfilled other requirements. A number of gardens and tombs of the Mughal nobility on either side of Grand Trunk Road give a glimpse of how fine this road must have been. The alignment of the road seems to have been changed from time to time. During the reign of Jahangir, it used to be close to Bari Doab Canal and went as far as Lahore Amritsar railway line. It then proceeded towards Tripolia Bazaar, which once existed near the railway station, Haveli of Mirza Kamran and Mohalla Dara Shikoh before entering the Delhi Gate of the Walled City. The important settlements along this road at that time were Fatehgarh, Ganj and Mughalpura, and finally *kos minar* near Garhi Shahu whence it directly proceeded towards Delhi Gate.

The Grand Trunk Road of the Shah Jahan period passed close to the Shalamar Gardens and used to be full of gardens, tombs and settlements. The tomb of Shah Hussain and the shrine of Madhu Lal in Baghbanpura were on one side of the road, whereas Anguri Bagh and the tomb of Mahabat Khan were located on the other side. From here the road extended towards Begumpura. The locality was surrounded by a number of important Mughal period tombs and gardens. Beyond it, Grand Trunk Road continued towards the Walled City.

Harike Road: Harike Road was a comparatively shorter route to Delhi, therefore, a number of travelers preferred to choose this road. This route was connected to Lahore via Ludhiana and crossed the River Sutlej at Harike. While coming from India, the first major small settlement one would come across was Badhana. It was an important settlement from the Sikh period. The most important structures of the town were a *haveli* and a *gurudwara*. The haveli is the finest residential structure in Punjab executed in fair-face brickwork. After Badhana, came Hudiara, Burki and there onwards Dharampura and the Mian Mir area. This route was traversed by Mohan Lal during his travels to Central Asia and Europe (Lal, 1840:10-11).

Internal courtyard of Sikh Period Haveli at Badhana (top)

Sikh Period Haveli at Badhana (bottom)

River Ravi and Lahore

When Emperor Akbar fortified the city, the River Ravi used to flow close to its northern side. The river used to be an important landscape feature of Lahore. Masud Saad Salaman, a Ghaznavid period poet, described the River Ravi in his *Qasida* (panegyric poems) in the following words:

"O Ravi, if paradise is to be found, it is you,

if there is a kingdom fully equipped, it is you

water in which the lofty heaven is you

a river in which there are a thousand rivers is you" (Qureshi, 1983: 20-22)

River Ravi at Lahore

There were numerous gardens along the river bank. Jahangir (1974: II, 183) has mentioned one such garden in the following words:

> "In one march after this stage I encamped at the garden of Mumin Ishq Baz which is on the left bank of the river (the Ravi) and has some lofty plane trees and handsome cypresses. It is certainly a rare garden."

Most of these gardens have vanished with the passage of time. William Finch who visited India in 1611 (Foster, 1921:161) best described the city and the river in the following words:

> "The castle or town is enclosed with a strong brick wall, having three to twelve fair gates, nine by land and three opening to the river; the streets are fair and well paved.... The castle is seated on Ravee, a goodly river which falleth into Indus, downe which many boats, of sixty tunne, being a journey of some fortie dayes alongst by Multan, Seetpote [Sitpur], Buchur [Bukkur], Rauree [Rohri] etc."

Roshnai Gate, Masti Gate and Sheranwala Gate used to face the River Ravi. The area between the river and Shahdara, where the tombs of Jahangir, Asif Khan, Nur Jahan and the garden of Mirza Kamran exist, had numerous gardens during the Mughal period.

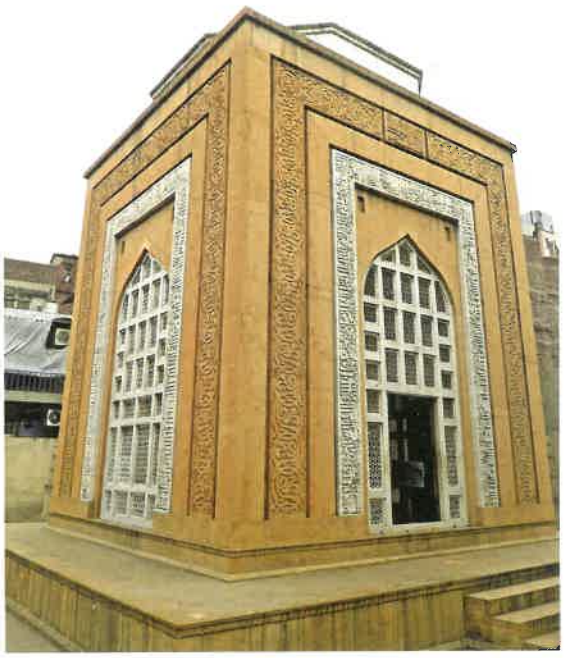
Francois Bernier, a doctor by profession, visited Lahore in 1664 as part of Emperor Aurangzeb's entourage and stayed for two months in a tent in the army camp outside the city. "The river on which the city was built", narrated Bernier, "one of the five rivers, is as considerable as our Loire, and is much in want of a similar embankment as that on which the road is carried on the banks of the French river, for it is subject to inundations, which cause great injury and frequently changes its bed: indeed within a few years the river had receded a full quarter of a league from Lahore, to the great inconvenience of the people (Bernier, 1891:383-84)." In 1664, the year Bernier and the Emperor were in the city, Lahore was threatened by a heavy flood, however, there was no embankment on the river. It was built some time later, altering the direction of the river.

The change of direction was witnessed by Mohan Lal who visited Lahore in 1832 on his way to Bukhara from Delhi. He stated that "a journey of four miles took us to Shahdara, where we crossed the river by ferry boats (Lal, 1840:19)." Ranjit Singh gave two villages to General Allard on the north-east between the river and the walled city. The shifting of the river alignment made possible the construction of the *samadhis* of Arjun Dev, Maharaja Ranjit Singh and Bhai Vasti Ram on the northern side of the Walled City.

The area between the river and the Walled City was used as a military camp by the British. It also served as a parade ground. The British established Minto Park on the northern side of the Walled City. On the north-west, lay the *samadhi* of Sir Ganga Ram, a great engineer and philanthropist with numerous contributions in Lahore and Jaranwala. At this place, Pakistan Resolution was passed in 1940. Pakistan Day Memorial designed by Nasr ud Din Murat Khan was also built at the venue for Pakistan Resolution in 1965. A branch of the River Ravi commonly known as Budha Ravi passed close to the north-eastern corner of the Badshahi Mosque. A lake has been built at this place but the river once passed close to Kamran's Baradari.

Urban Development South of Walled City

There has been intense architectural activity outside the boundaries of the Walled City particularly on its southern side. The monuments located in the area belong to as early as the Ghaznavid period but during the fall of Mughal Empire there were large suburban settlements around the Walled City. The most important monuments were located in the area between the Bhati and Shahalmi gates. The tomb of Qutbud Din Aibak, the founder of Delhi sultanate, and the shrine of Yaqub Zanjani, a Sufi saint of Ghaznavid period, are located in the vicinity of Lohari Gate while the shrine of Ali Hajveri is located close to Bhati Gate.



Tomb of Qutbud Din Aibak

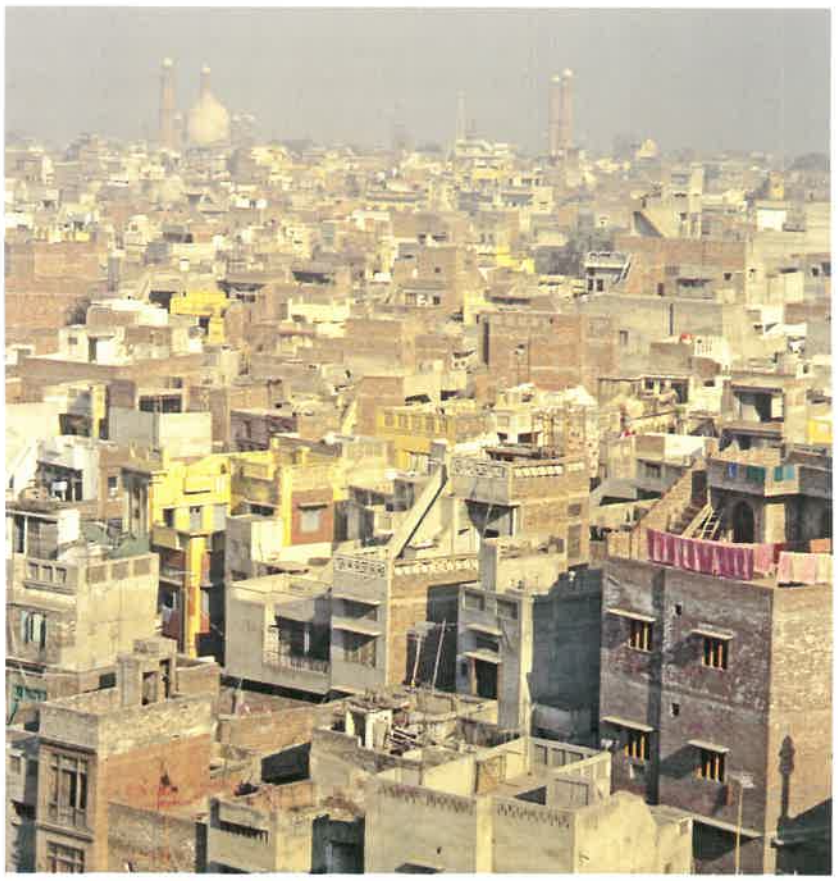
In front of Lohari Gate lies Anarkali Bazaar. The straight bazaar leads to Mozang via old Anarkali and Jain Mandir mentioned earlier. Just at the beginning of the bazaar on its eastern side lies the tomb of Qutbud Din Aibak who died in Lahore while playing *Chogan* (polo). According to Tehqiqat-e-Chishti, there once existed a tomb over the grave which was pulled down by the Sikhs. It was later acquired by the Department of Archaeology who constructed a beautiful tomb using the features derived from the buildings of Qutbud Din Aibak. Further south- east, one can find the shrine of Syed Yaqub Zanjani, a Sufi saint of the Ghaznavid period. The tomb is located at the rear side of Sarai Ratan Chand built during the Sikh period. Just south of the tomb of Yaqub Zanjani lies Chobara Chajju Bhagat. The Chobara once rested on a large platform which was surrounded by a large garden and a spring (Latif, 1892:207). It is said that Chajju was a *sahukar* (money lender). Many stories are associated with him. According to one legend, a poor childless lady came to him and asked him to pray for him. Chajju asked her to go to the Ganges and do *ashnan*. The poor lady replied that she had no money to go to the Ganges. Chajju responded that he would bring the Ganges close to her. He asked the lady to do *ashnan* in the spring, which she did and thereafter she conceived a child. The *chobara* was visited by many people coming from far-flung areas who used to camp in the garden. Today, this beautiful Mughal period structure lies in the courtyard of Muhammad Baskhsh Memorial Hospital inside Mayo Hospital, Lahore.

Going further south, one finds the shrine of Abdul Razzak, a saint of the Mughal period. The tomb is octagonal in shape and surmounted by a hemispherical dome covered with glazed tiles. Owing to the blue color of the glazed tiles, it is known as Nila Gumbad. A *madrassa* and a large commodious mosque provided with spacious courtyard and a large reservoir for the ablution are attached to the tomb. Further south, the area is connected with Multan Road and Ferozepur Road.

Chajju Bhagat ka Chobara (left)

Interial of Chajju Bhaggat ka Chobara (right)

History and Spatial Growth of Lahore



Aerial view of Lahore Walled City

"I have purchased Lahore with my life.

By giving life for Lahore

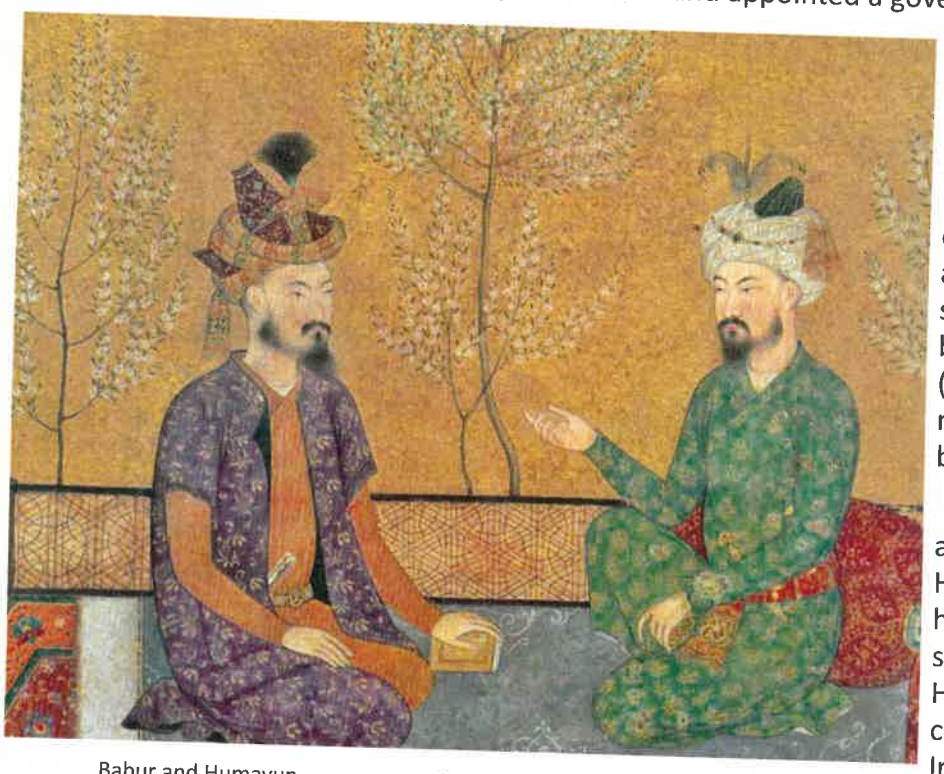
Actually I have purchased another paradise." –Nur Jahan (Suvorova, 2011: 26)

Lahore has a glorious history and is encompassed by rich traditions in all spheres of life. It remained one of the chief cultural centers under Ghaznavid rule. Indeed Lahore's history at that time (1059-1186) read like a prelude to Mughal glory. The Mughals (1525-1749) made it one of the most splendid cities of South Asia by constructing spacious mansions, elegant tombs, grand mosques and paradise-like gardens and adorned them with marble, pietra dura, glazed tiles and fresco paintings. Mughals were followed by the Sikhs who ruled the area for almost a hundred years. During this time, the suburbs of the gardens fell into decay due to neglect and destruction. The British defeated the Sikhs in 1849 and took control of all the territories occupied by them. The British planned and developed almost another new city in the south and southeast of the Walled City. New concepts inspired from European tradition were introduced in architecture and urban design. The growth of Lahore, after independence, took place almost in every direction. Today, the city of Lahore presents distinct architecture and urban patterns of three major historical eras and these have been discussed in this chapter.

Bilingual Ghaznavid Period Coin, Mahmudpur Mint – Obverse (above) Reverse (below)

Lahore: Brief History

Lahore, the cultural heart of Pakistan, is an important city of South Asia. The early history of Lahore goes back to around 4th century AD. The earliest settlement was presumably founded in the area around Lahore Fort and *Paniwala Talab* (Rehman, 1997a: 169). It then flourished in the south and southeast directions. Lahore came into prominence during the early 11th century when it was captured by Mahmud of Ghazna in 1026 AD (Schemmel, 1983:22-23). He appointed Malik Ayaz as viceroy of Lahore. Following his conquest, a number of saints, including Syed Ali Hajveri, came to Lahore and settled here. The other Ghaznavid period saints include Shah Ismail and Syed Yaqub Zanjani. Miran Husain Zanjani another notable saint of this period also established his *Khanqah* in the northeast of Lahore. The settlement of Mahmudpur along with a mint was founded during this time. Lahore appears to have remained an important seat of the empire until it was shifted to Delhi by Muhammad Ghori in 1160 AD. In 1206, in a grand ceremonial celebration, Sultan Muhammad Ghori gave Qutbud Din Aibak the title of Malik and appointed him as heir to his Indian possessions. Qutbud Din Aibak reigned over India from Delhi, but died in Lahore after falling from his horse while playing *chogan*. From 1193 AD to 1524 AD, a period of 338 years, the city remained the provincial capital of the Delhi sultanate comprising Turk, Khilji, Tughluq, Syed and Lodi dynasties. During this time, Syed Mubarak Shah (1416-21) had the fort and city wall rebuilt and appointed a governor with orders to live in Lahore (Sirhindi, 1990: 204).



Babur and Humayun seated in a garden

Lahore became part of the Mughal Empire when Babur conquered Hindustan in 1526 AD. The Mughals preferred to use Grand Trunk Road and Khyber Pass to travel to Afghanistan and beyond. In this way, the population increased and the city expanded in every direction. It became a place of royal residence. Scholars, poets, men of letter, artists and sufi saints soon settled here; tombs, mosques and *baradaris* were built in every direction. The city became, says Abul Fazl (1989: 17), "the grand resort of all countries whose manufacturers present an astonishing display and it is beyond measure remarkable in populace and extent."

Prince Kamran, son of Babur, seized Punjab and annexed Lahore to Kabul during the reign of Humayun. Here, he built a house and a spacious garden to mark his presence in the city. The political situation soon started worsening and it no longer remained in favor of Humayun. Within a decade the Afghans had resumed control of Lahore and Emperor Humayun had to flee to Iran via Sindh. It was important for him to reconquer Hindustan and reestablish Mughal rule founded by his father (Wescoat, 1990: 106-116). As he approached Lahore from Kabul in 1555, the Afghans fled and the city was retaken peacefully. During his stay in Iran, Humayun became deeply interested in Persian arts particularly miniature painting and invited artists to accompany him to Hindustan. Renowned artists such as Mir Syed Ali and Abdus Samad from Shiraz joined him at Kabul and came to Hindustan (Beach, 1987: 49). These artists laid the foundation of Mughal miniature painting. During this time, Lahore also became centre of production of astrolabes.

Humayun Period Coin, Lahore Mint – Obverse (above) Reverse (below)

The presence of the rebels in Potowar and hills nearby remained a constant threat to the line of communication between Lahore and Kabul. The viceroy of Lahore did not prove to be efficient, therefore, Humayun sent his son Akbar to assume control. No sooner had Akbar arrived in the locality then the news of his father's death arrived. Instead of returning to Agra to secure the succession, he wisely stayed here to deal with Sikandar Suri for almost four months, settled affairs, and appointed loyal officers to take firm control of the area before returning to Agra. On his way back, he was coronated at Kalanour and assumed the title of Badshah on 963AH/1556AD.

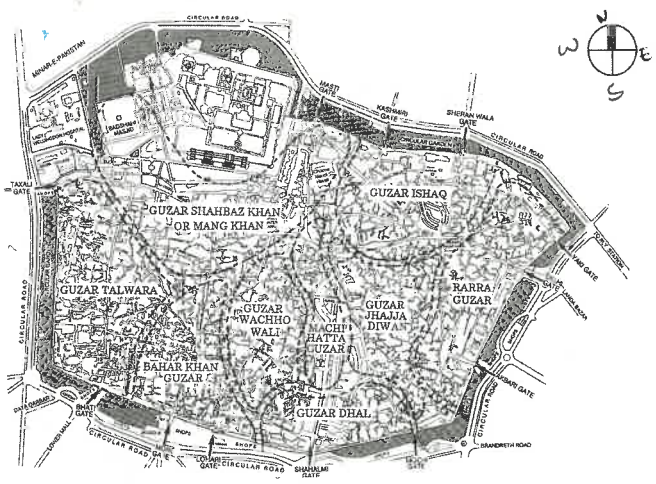
Akbar made Lahore his headquarters from 1584-98 AD and thence undertook the conquest of Kashmir and Afghan tribes. Lahore became the focus of literary and philosophical discussions. Men of letter resided here and many literary works were produced. Akbar also established a

school of miniature paintings and therefore many manuscripts were illustrated. The emperor enclosed the city and Lahore Fort with a fortification wall having thirteen gates, each facing important roads leading to the city. Artists, craftsmen and *mimars* were brought from Agra to adorn the court. Within one century, the city surpassed most eastern cities in glory.

Emperor Jahangir and Courtier

Akbar not only enclosed the greater part of the built-up area, but also included cultivated land particularly on the eastern side. The principal street ran between Delhi Gate and Taxali Gate. From either direction the street rose up over the most elevated and oldest parts around which the Mughal city was founded. From the main thoroughfare a number of streets branched off to the gates on the north and south, the most important being those leading to the southern side towards Shahalmi and Lohari gates. The north-south and east–west streets determined the basic layout of the plan. The secondary streets followed the diagonals from the principal squares such as one leading to Masti Gate from Chowk Kotowali or to Mochi Gate from Chowk Rang Mahal. These primary and secondary streets divided the built-up area into a number of irregular triangular or trapezoidal shaped blocks or *mohallas*. The largest neighborhood was Mohalla Langar Khan which stood near the present day Accountant General's Office (Newell, 1921: 7).

When the city wall was built, it enclosed most of the built-up area. Outside the city there were *sarais*, burial grounds, and a scattering of gardens and villages. Owing to the requirements of large-scale construction, there were numerous kilns built outside the city. By the end of Akbar's reign, the landscape developed had completely altered prospects. Within a short period of time, the city started expanding beyond the city wall, accommodating pleasure gardens, villages and Sufi shrines. This was due to the fact that a large number of officers, military personnel, men of letter, and scholars joined the Mughal court. During Akbar's reign, the city expanded from nine *guzars* within the Walled City to twenty-seven *guzars* outside the Walled City. The *guzars* located within the walled city were Guzar Rara, Guzar Ishaq, Guzar Shahbaz Khan or Mang Khan, Guzar Talwara, Guzar Bahar Khan, Guzar Wacho Wali, Guzar Machhi Hatta, Guzar Dhal and Guzar Jhaja Diwan. Each of these *guzars* had a few *mohallas*, a bazaar and sometimes even a fort. The economic prosperity in Europe led to an enormous increase in demand for oriental goods. This brought European traders to the east, particularly for indigo, pepper, spices, carpets, silk and cotton goods. In addition, several missionaries also visited India. The Portuguese Jesuits mission visited Akbar's court and the first church was built and opened on 7th September 1597. The third Jesuit mission led by Jerome Xavier presented illustrated books to Emperor Akbar (Mclagan, 1932: 320). At the same time, Dastan-e Masih was illustrated with miniature painting (Ahmad, 1995).



Map showing Guzar of Lahore Walled City

After the death of Emperor Akbar, Lahore continued to remain an important city of the Mughal Empire during the reign of Emperor Jahangir. He liked Lahore very much; therefore he would

داستان مسیح

HISTORIA CHRISTI

PERSICE

Conſcripta, ſimulque multis modis contaminata,

A

P. HIERONYMO XAVIER, Soc. Jeſu.

LATINE

Reddita & Animadverſionibus notata

A

LUDOVICO DE DIEU.

LVGDVNI BATAVORVM,

Ex Officina Elſeviriana, A° cIↃ IↃ cxxxix.

Dastan e Masih (left)

An illustration from Dastan e Masih (center)

An illustration from Dastan e Masih (right)

spend a significant amount of his time here, particularly during the summer season when he would travel to Kashmir almost every year. He built a number of buildings in Lahore Fort employing the services of Mir Abdul Karim and adorned them with miniature paintings. Some of the best paintings using Christian themes are still preserved in the Kala Burj (Koch, 2001: 12-37). The paintings in Maryam Zamani Mosque also show the vast popularity of this art in Mughal architecture. The work on the picture wall of Lahore Fort also started during his time (Vogel: 1920). He contributed significantly to the development of the city and the neighborhoods. Jahangir's period is especially important since all kinds of building arts and crafts were practiced in Lahore during his time. Simultaneously, due to the proximity to his favorite hunting resort at Sheikhupura, the road linking Lahore and Sheikhupura was paved and bridges were constructed (Rehman, 1993: 187). In addition, Jahangir ordered the planting of trees between Lahore and Attock. Thus, travel along these historic highways became comfortable and convenient.

Jahangir paintings on the soffit of the dome of *Kala Burj* in Lahore Fort (left)

Empror Jahangir in the garden of Mirza Kamran (right)

The architecture of all Jahangir period buildings in Lahore Fort is, in fact, a continuation of the architecture of Akbar's period, except for a few additions to landscape features. The red sandstone construction and the theme and style of carving on columns are based on the concept of

Emporer Shah Jahan and Asaf Khan

the architecture of Fatehpur Sikri built during Akbar's reign. A semblance of the emperor's contributions in Kashmir and Wah can be glimpsed in the Lahore Fort. It was also during Jahangir's time that the art of construction of gardens reached its maturity. Landscape became an integral feature of residential gardens. In addition to soft and hard landscape features, water became an important element of the built environment.

The Mughal nobility started contributing to the urban expansion. Sheikh Farid Bukhari, who had defeated Khusro on the bank of Beas, was appointed governor of Punjab and awarded the title of Murtaza Khan. He built a *mohalla* after his name, as well as a large bath and a *chowk*. In addition, Mian Mir established his *khanqah* in the vicinity of Lahore. The gardens of Momin, the *Ishaq baz* and Qasim Khan are also said to have been constructed in Lahore during Jahangir's reign.

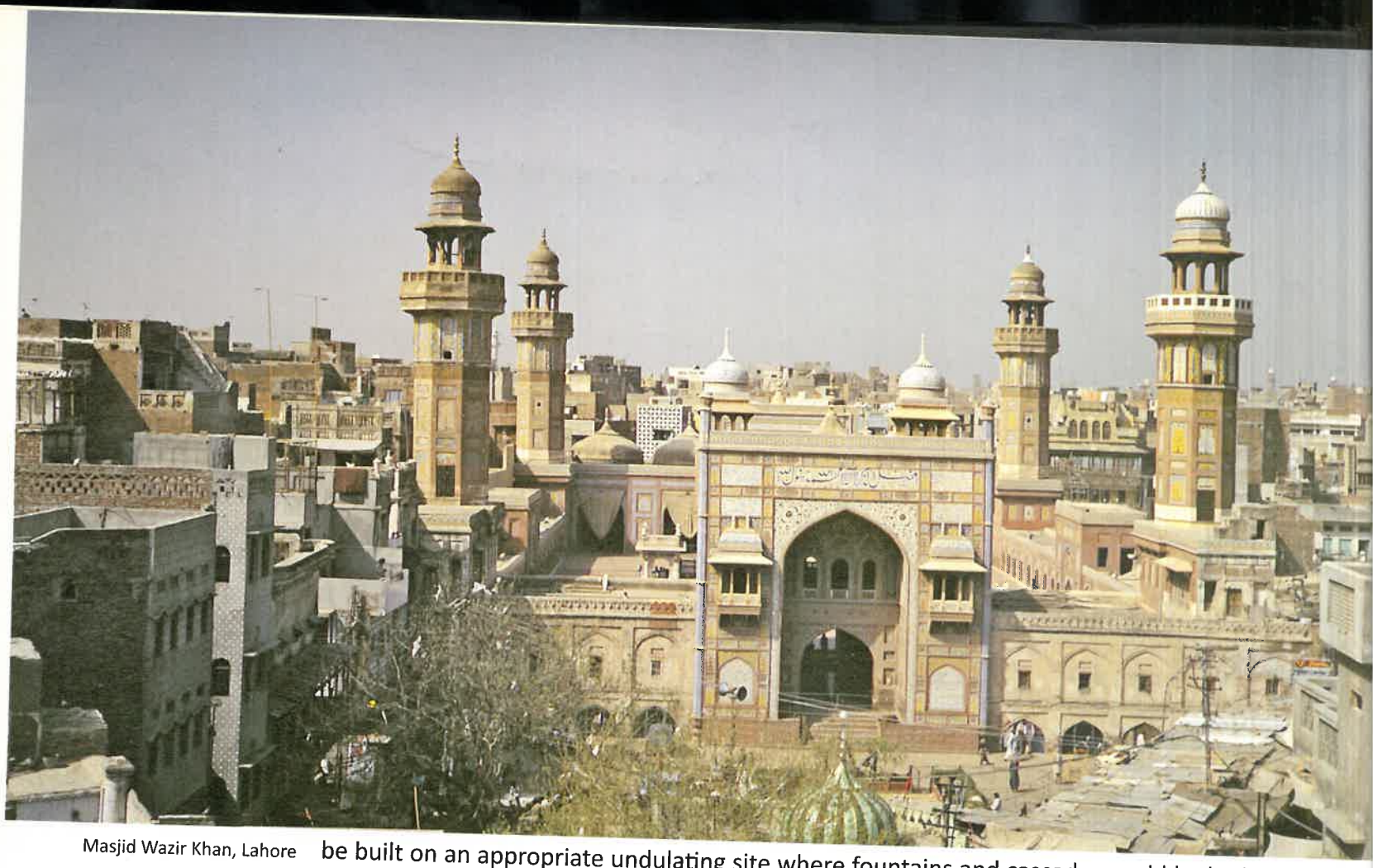
Jahangir Period rare coin of Lahore Mint – Obverse (above)
Reverse (below)

In the nineteenth year of Shah Jahan's reign, Asaf Khan was appointed governor of Lahore in succession to Sadiq Khan. Lahore continued to prosper under his able and munificent administration. His interest in architecture led to embellishment of both town and citadel. Asaf Khan built a large palace with beautiful gardens in Lahore which was admired by William Finch (Finch, 1921: 165-66). Lahore became an important city for Nur Jahan and her family. She preferred to live in Lahore after the death of Emperor Jahangir at Rajouri and was laid to rest in the same city. Her tomb was built outside Lahore in Shahdara.

Lahore received Shah Jahan's special attention and a large number of residential, tomb and pleasure gardens were built in every direction. Sultan Khurrum was born in Lahore on 30th Rabi-ul Awal 1000 AH (1592 AD). He received the title of Shah Jahan from his father in 1616, when he was nominated as successor and commander-in-chief of the army of Deccan. At the time of Jahangir's death, he was in Deccan. Nur Jahan wished to raise Shehryar to the throne. However, eventually Shah Jahan was proclaimed as emperor at Lahore, and a *khutba* was read in his name in all the mosques.

Shah Jahan had a great fondness for his birthplace. He and his governors made several contributions within the Walled City as well as in the suburbs. The buildings of Daulatkhana (fort) were in dilapidated condition. He ordered the reconstruction of *ghusulkhana* and *khwabgah*. The Shahburj building was not pleasing; therefore orders were given to dismantle and rebuild. The work was left to the taste of Asaf Khan. During this time, Lahore was at the height of its splendor. As headquarters of the *suba* (province), it became a garden city. The elite and administrators of the Mughal Empire, wherever they served, maintained a mansion or garden retreat in Lahore (Brahman, 1970:84-88). In particular, Wazir Khan and Allami Afzal Khan built spacious edifices. The most important project undertaken by Wazir Khan in Lahore was the construction of the Delhi Gate Bazaar area which included a *sarai*, *hammam*, bazaar and Wazir Khan Mosque (Rehman, 1997a: Latif, 1892: 218-22). This was the most important urban design project undertaken in Lahore during the Mughal period. The *hammam* was decorated with beautiful fresco painting, and was attached with a *bazaar* or marketplace with a double-story building flanking it on either side. The grand mosque is still considered one of the finest works of art in Lahore (Mumtaz, 1995: 68-79). Mohalla Dara Shikoh was another fine area which contained beautiful houses, mosque and a bazaar on the eastern side of Delhi Gate (Latif, 1892: 64).

In 1631, Ali Mardan Khan was appointed as the governor of Lahore province by Emperor Shah Jahan. He along with Mulla Ala ul Mulk Tuni (Fazil Khan) is credited with constructing the canal which later changed the landscape of Lahore (Soroush, 2011: Vol. I, Fasc. 8, 868, Kamboh, 1974: II 259-60). On the completion of the canal, the emperor ordered in 1633 that a spacious garden



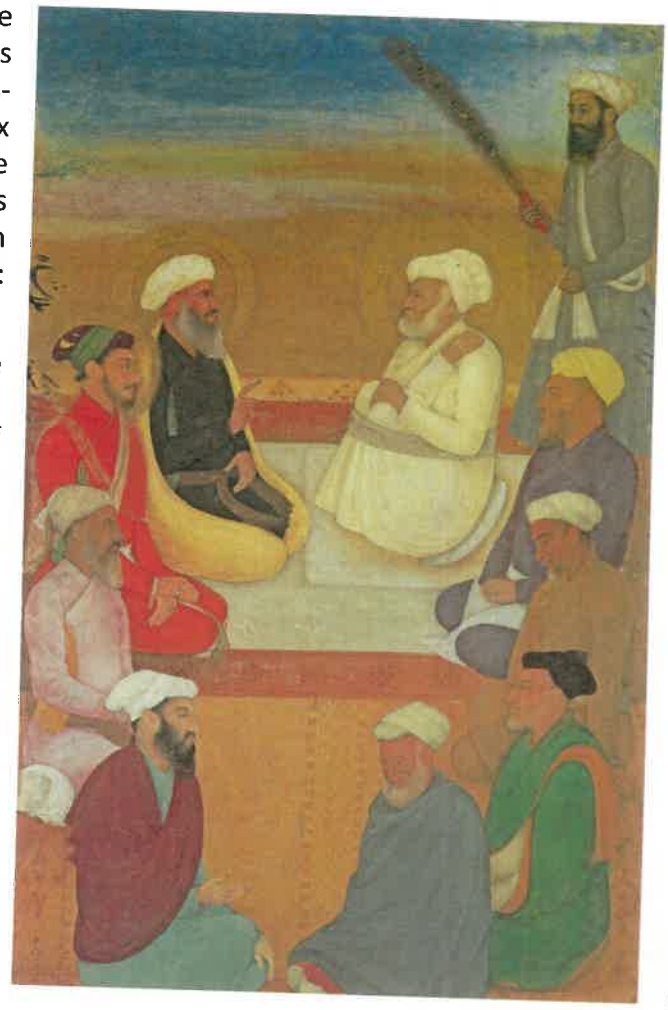
Masjid Wazir Khan, Lahore

be built on an appropriate undulating site where fountains and cascades could be built and fruit trees be planted. Khalil ullah Khan was entrusted with the execution of the work with the help of other servants of the empire. Thus, in a short span of time the finest garden of Mughal empire was completed. The highlight of this garden was its hydraulics system, the most finest and elaborate at the time compared with that of any other garden in the subcontinent.

In the same year, Yamin ud Daula Asif Khan, brother of Nur Jahan, died. He was commander in chief of the royal army. By order of the emperor, his remains were interred on the western side of the tomb of Emperor Jahangir, along its east-west axis (Lahori, vol. I: 475-76). The emperor ordered that the tomb be clad with white marble and surrounded by a garden. The Shahdara area which contains *rauzas* (tombs) of Emperor Jahangir, Asif Khan and Queen Nur Jahan (d.1638) is one of the most important funerary complexes in the subcontinent.

Mian Mir, Mullah Shah & Dara Shikoh

On the other hand, the Mian Mir area also received special spiritual significance. Mian Mir was most revered by everyone, both in the imperial circles as well as the masses. Emperor Jahangir was known to have invited him to Agra. Shah Jahan paid him several visits. He was the spiritual guide of Dara Shikoh, the emperor's eldest son. He was buried in the village of Ghispur near Alam Ganj. A large shrine complex comprising a mosque, tomb, and a rest house for devotees was built. Close to the tomb lies the tomb garden of Nadira Begum, Mullah Shah Badakhshi and Khawaja Bihari (Wescoat: 1996: 165-167).



By the end of Shah Jahan's reign, Lahore had become one of the finest cities of South Asia. He was considered a true connoisseur of art and architecture, possessing fine taste and excellent vision. This was reflected in the city of Lahore which, at the culmination of his rule, contained numerous suburbs, tombs, pleasure gardens and mosques. These tombs and gardens were spread evenly in every direction particularly along the major roads leading to the city. Bernier, who passed through Lahore in 1664, noticed the magnificence of its cita-

Aurangzaib travelling in a boat

del, the thronging of its streets and markets and the loftiness of its houses, which he compares with Delhi and Agra.

However, with the end of Shah Jahan's rule the city started to decay. Owing to the perpetual wars of succession, Aurangzeb had less time to hold court at Lahore than his predecessors. Nevertheless, Lahore was still referred to as *Dar-ul Saltanat* in all public correspondence. The most lasting architectural contribution made by Emperor Aurangzeb was the construction of Badshahi Mosque which remains the largest mosque in Lahore even today (Latif, 1892: 67). The other important project undertaken during Aurangzeb's reign was the construction of *Bund-i- Alamgiri*. By the year 1662, because of the nature of encroachments on the River Ravi, the area had suffered much damage. Therefore the emperor, in his wisdom, ordered a massive embankment of brickwork constructed for about four miles along the river bank, for the protection of the city. Latif reports that a row of Persian wheels were worked with bullocks along the bank, to irrigate the gardens of the nobles which lined the edge (Latif, 1892: 67).

Rare coins of a Alamgir Period, Lahore Mint – Obverse (above) Reverse (below)

Prayer chamber of Badshahi Mosque, Lahore (below)

After the fall of the Mughal Empire, Lahore became the battleground for the Abdalis, Nadir Shah and the Sikhs. From mid eighteenth to the beginning of nineteenth century, Lahore suffered periodical invasions, pillage and depopulation, and was thus reduced from a mighty city to little more than a walled township set in a circle of ruinous waste. Quarter after quarter it became gradually deserted. The wealthy residents of "Guzar Langar Khan" relinquished their "country seats" and retired for safety within city walls; the merchants fled in numbers to Amritsar. At length, the inhibited portion of the city was confined to the area surrounded by the city wall. Towards the end of eighteenth century the Durrani's hold on the Punjab weakened. A few years later the Maharattas put in a brief appearance but they were soon repelled and Sikh rule under Durrani sovereignty was fully established. The coalition of Sikh chief was replaced by Ranjit Singh in 1799. Soon after assuming power the new governor declared his domains as independent State which extended from Peshawar in the northwest to Kashmir in the north and Multan in the south. In 1801, he assumed the title of Maharaja in 1801 (Lafont, 2007: 67), established a mint and commenced his career as a sovereign. Lahore was now a very different place from the one of the Mughal peri-

Earliest rare coin of Sikh Period (1822), Lahore Mint – Obverse (above) Reverse (below)

British Period Medal, Lahore Mint

od. From a mighty city it had sunk to the position of a mere township, and even within its dilapidated walls it was but sparsely populated; outside was ruin and devastation. The only signs of life were in a few scattered hamlets including Ichhra. The Sikhs ruled the area for almost a hundred years until the end of rule of Dulip Singh who was formally deposed on 29th March 1848. The Sikh kingdom of Lahore came to an end; the territory was annexed to the British Empire. The British travelers who visited Lahore during Ranjit Singh's reign described decaying and ruinous suburbs. During this time, Sikh nobility built gardens particularly on the eastern side along Grand Trunk Road. The Sikhs misused tombs and mosques and stripped off marble and other costly finishes from the buildings of the Mughal period. The Qila Gujar Singh area was developed. The Mughal buildings were badly treated and their gardens remained neglected. Sikh rule ended in 1849 and the British became supreme rulers.

The British established their administrative headquarters near the tomb of Anarkali where General Ventura and his military advisers held office (Ross, 1883: 121-22). The troops were housed in Anarkali barracks, an old Sikh cantonment. The British soon found this place unhealthy or too near the places of displeasure in many ways. This was felt strongly by John Lawrence who observed, "Few suburban localities could be found in any province presenting such peculiar sanitary difficulties as the vicinity of Lahore. The station of Anarkali with its adjunct is dotted over an area of several square miles, over which extend the ruins of not one but of several successive cities of various ages and various dynasties. The surface of this extraordinary plain is diversified by mounds, kilns, bricks, stones, broken masses of masonry, decaying structures, hollow, excavations and all the debris of habitations that have passed away. The soil is sterile and impregnated with salt petre, but the ground is interspersed with rank vegetation, and though generally arid yet from its undulating nature possesses an unfortunate attitude for accumulating stagnant water."

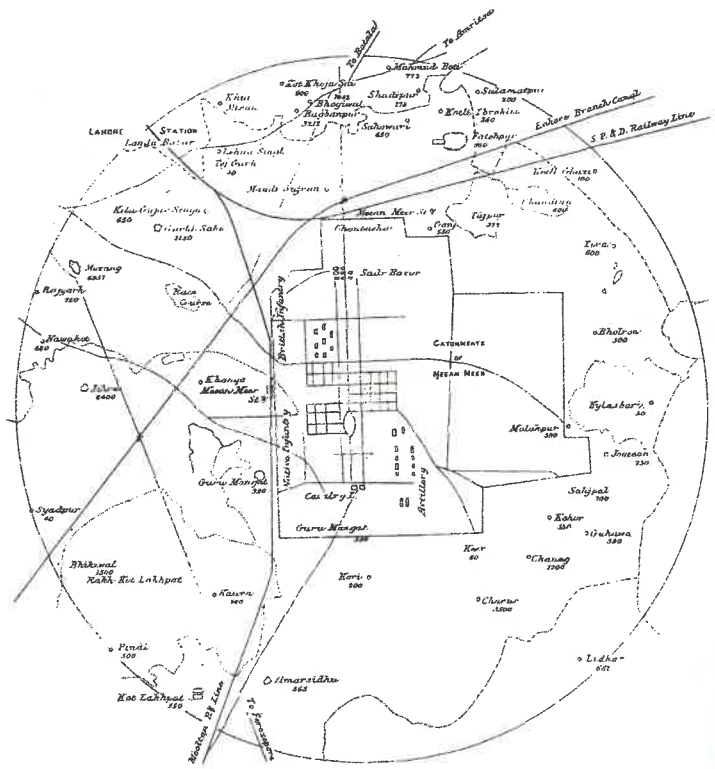
Beside the administrative headquarters, the most important task at this stage was the location of the cantonment for which the British sought the opinion of Sir Charles Napier, the Army's Commander in Chief. Henry Lawrence (political agent), his brother John (Chief commissioner), Charles Mansel (member board of administration) and Robert Montgomery (judicial Commissioner) and Col Napier are said to have met and ridden through town. The following account by Reginald Bosworth Smith (1883: 345), Lawrence's biographer, describes what happened next in the following narrative:

'You want to know where the cantonments are to be, do you?' Said Sir Charles, 'follow me then,' and as he spoke, he dug his spurs into his horse and rode as hard as he could go, neck or nothing, across country some three or four miles. At last the old General reined in his horse in the middle of the plain, to all appearance at simple haphazard, and when the last of the long pursuit came up, he cried from the midst of the smoking steeds and breathless riders, 'You asked me where the cantonments are to be; they are to be here.'

The site of Mian Mir, four miles to the southeast of the town, was eventually selected for the cantonment. The planning was based on a gridiron pattern following strong military precision. To avoid monotony of physical design two focal points - one in the north towards Saddar Bazaar and the other towards the south where the vista is closed by the cantonment church – were provided. It was built following the principles of the "Garden City" concept. Initially desolate, with water drawn from the Bari Doab Canal greenery soon flourished breaking the glare of the metalled roads. To link the Secretariat with the Cantonment and with the fort, two roads were laid down,

Villages around Contonment of Mian Mir (left)

Detail of 1867 map showing Plan of Mian Mir Cantonment (right)



the upper and lower Malls. They formed the main arteries of early colonial Lahore. At the junction of these arteries in addition to the Government offices, numerous schools, colleges, Punjab University, Mayo School of Arts and a museum were founded. On The Mall, nearby, the European firms established their headquarters. Halfway between the Secretariat and cantonment, on the northern side of The Mall, Donald Town, the Civil Lines, and residence of the Lieutenant Governor were built. Close to the town, the two Malls, Mayo Hospital and medical college were founded. The Governor's House was developed around the tomb of Muhammad Kasim Khan, a cousin of Emperor Akbar. In front of the Governor's House, one of the finest English gardens, the Lawrence Garden, was established (Rehman, 2009: 205-217). Both these establishments had Mughal period kilns within their premises and construction work on these projects was started in the early sixties shortly after the appointment of Robert Montgomery as Lieutenant Governor.

During this time, Bari Doab Canal, which separated the city from the Cantonment, was excavated. The canal, with the roads that ran along its banks, swung in a great arc from the north-east to south-west irrigating the lawns of important settlements laid out for British bureaucracy (Rehman: 2009). A channel drawn from the canal also irrigated the circular garden around the Walled City. The canal became one of the most pleasant features of Lahore where, much later, most of the important post-partition settlements of Gulberg, Shadman, Shah Jamal, Muslim Town and Garden town were founded.

Subsequently two other routes were developed on both sides of The Mall linking the city with the Cantonment (Mayo Road), and the cantonment with Multan Road (Jail Road) meeting near Chauburji skirting the southern extremities of the town (Grenfell, 1961: 118). Mayo Road stretched between the railway station and Saddar Bazaar. The Railway Colonies, hospital and Mayo Gardens flourished on its either side. Jail Road joined Oval Ground and the Cantonment in the east and passed along a graveyard for British elite, Mental Hospital, Kinnaird and Lahore Colleges, Race Course Park, Jail, Bahawalpur House and the graveyard of Miani Sahib before terminating at its western end.

Layout plan of Government Officers Residence Lahore

From the railway station a number of roads were laid out like spokes of a wheel. These included Brandreth Road, Railway Road, Nicholson Road, McLeod Road and Empress Road. Some of the roads close to the city already existed before the British occupation. As the eastern and southern routes reached the city, crossroads branched off linking the main approaches. The most heavily populated area in the British Lahore was to the south of the old city and here the tracks took on the character of permanent streets fixed by the buildings on either side. These areas contained old mosques, tombs, *smadhis* and gurudwaras belonging to Mughal and Sikh periods.

The British laid much emphasis on the area around Cantonment, Secretariat and the railway station. The Civil Lines, Governor's House, the Lawrence Gardens started by Montgomery and Race Course, which were principal residential and recreational areas furnished with clubs, all lay along the cantonment side of the town in easy reach of the required protection and security. The roads built to enable the *Sahibs* to drive sedately from house to office or club or cantonment was superimposed on an indigenous pattern. Grenfell (1961: 120) noted that "through deference to local custom or through lack of appreciation of the importance of town planning, it is difficult to say which every bullock track was retained. Indeed the *Sahibs* may even have added a few bridle paths of their own. No attempt was made to rationalize the requirements of the old and the new. East was east and west was west and that is that." The roads meant for the British were wide, spacious and lined with trees on both sides. In addition, front lawns of the bungalows further added spatial dimensions to the landscape.

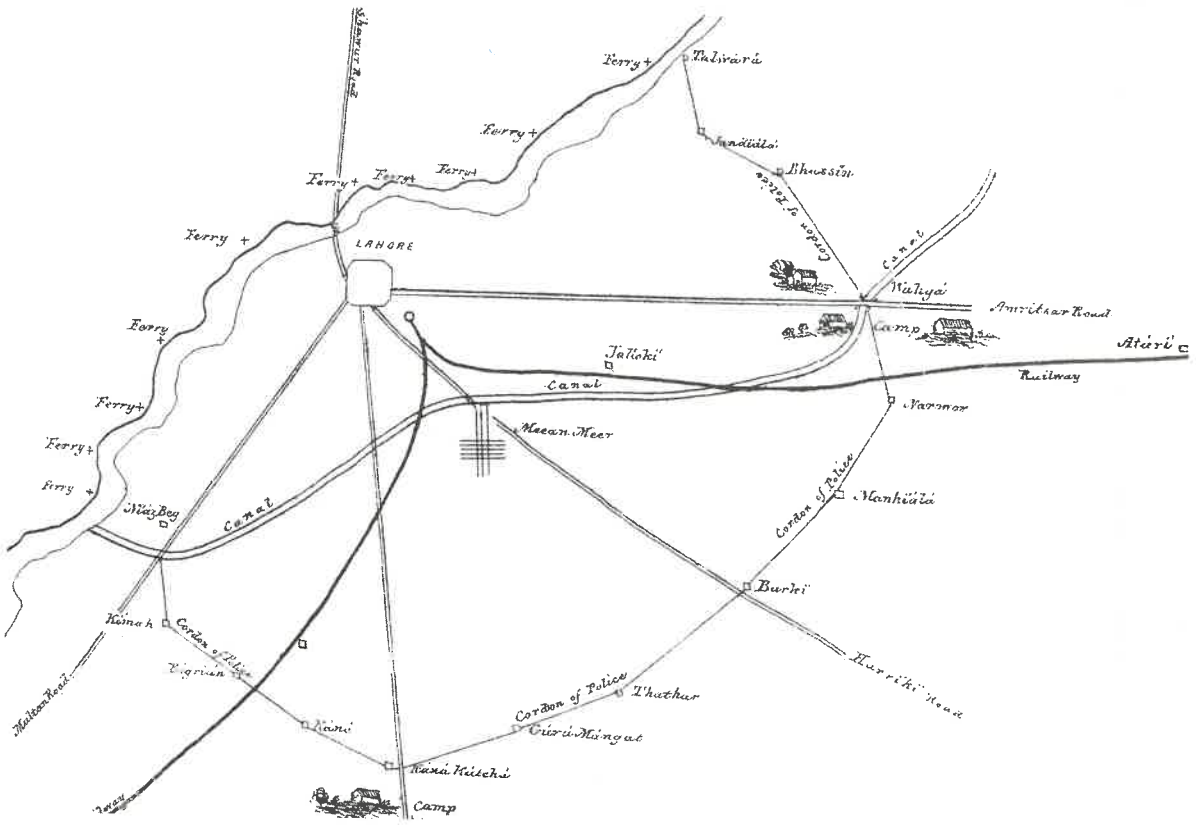
All architectural and housing development depends largely upon the economic prosperity and socio-political environment. To improve economic conditions, the British constructed inun-

dation canals to irrigate the bar areas and bring more areas under cultivation. New towns and rural settlements were founded and a railway network was established to transport crops to areas wherever needed. Lands were sold in the newly-established *mandi* towns and settlements and an enormous amount of finances was raised both from agriculture and real estate business (Rehman, 1991: 126-140). The money was, in turn, spent on the development of infrastructure and construction of public buildings. In Lahore, the housing and architectural activity of different time periods struggled to follow the ups and downs of such realities within the newly-built road infrastructure.

In the early years, the British did not pay much attention to irrigation but they kept an eye on the extension of agriculture, partly on irrigated and mostly on *barani* (rain fed) areas. From 1861 to 1868 was a period of exceptional harvest and great prosperity. Population growth was steady and there was no danger of food shortages. The first step was construction of road and railway infrastructure so that rural areas could market their products. The next step was construction of police stations, cantonments, churches, schools, the telegraph and these projects absorbed most of the available funds. The private civil society and religious organizations also played their part in the development of schools and other community facilities.

Development continued at full pace but was abruptly interrupted after 1876 when India faced two major setbacks. The first was the great famine between 1876 and 1878, which brought a number of communicable diseases including plague and cholera. During this time, Lahore was

1876 Map of Lahore, showing establishment of Hospital facilities at Kahna & Wahga



cordoned off by the police and two new hospital facilities were established at Burki and Kahna Kacha where every traveler was examined before being allowed to enter the city. The second obstacle in development was the second Afghan War which took place between 1878 and 1880. During this time, the British administration began to ponder over possibilities of turning Punjab into a surplus food producing area and, in this regard, major irrigation projects were commenced in earnest in the decade of 1880s. At the census of 1854, the city had a population of 94,000. By 1881, it had risen to 149,369 - an increase of slightly over 60% in 27 years. A large number of public works programs were initiated in Lahore with special focus on educational projects. The contributions from Bhai Ram Singh and John Lockwood Kipling began to flourish all around the city.

The irrigation projects which started in the eighties began to show completion in the nineties. The lower Chenab Canal was completed in 1892, which marked the turning point in the economic history of Punjab. New *mandi* towns such as Lyallpur (1895) and *chaks* were founded in Chaj or Chenhat Doab. It was, however, some years later that the new development program made its

impact on Lahore. New railway lines and roads connected Lahore with the rest of the cities. These development activities had much impact on the future growth of Lahore. In particular, the two workshops of railways had much impact on the migration of population.

The twentieth century began slowly but development activities continued. John Begg, consulting architect to Government of India, designed a large number of projects in Lahore which included Physics and Biology Departments at Government College, Veterinary College, the Railway Church and Time Keeper's Office in Mughalpura.

John Begg in a *Report on Modern Architecture* wrote to the Government of India: "....The art though still living is dormant. Is it worth reawakening? Should we allow it to die the natural death that from one cause or another has overtaken nearly all similar art traditions in other countries or should we try to give it a new lease of life?" I think.... The living tradition is an artistic asset of such incalculable value that we cannot afford to allow it to die out; that it is well worth reawakening even though the complete process should be lengthy and interim results not acceptable may be to all (Sanderson, 1913:1)."

In addition to other buildings, a number of small housing projects were undertaken by local architects throughout the town particularly in Gwalmandi and in Donald Town. The government started new irrigation projects which included the Triple Canal Project.

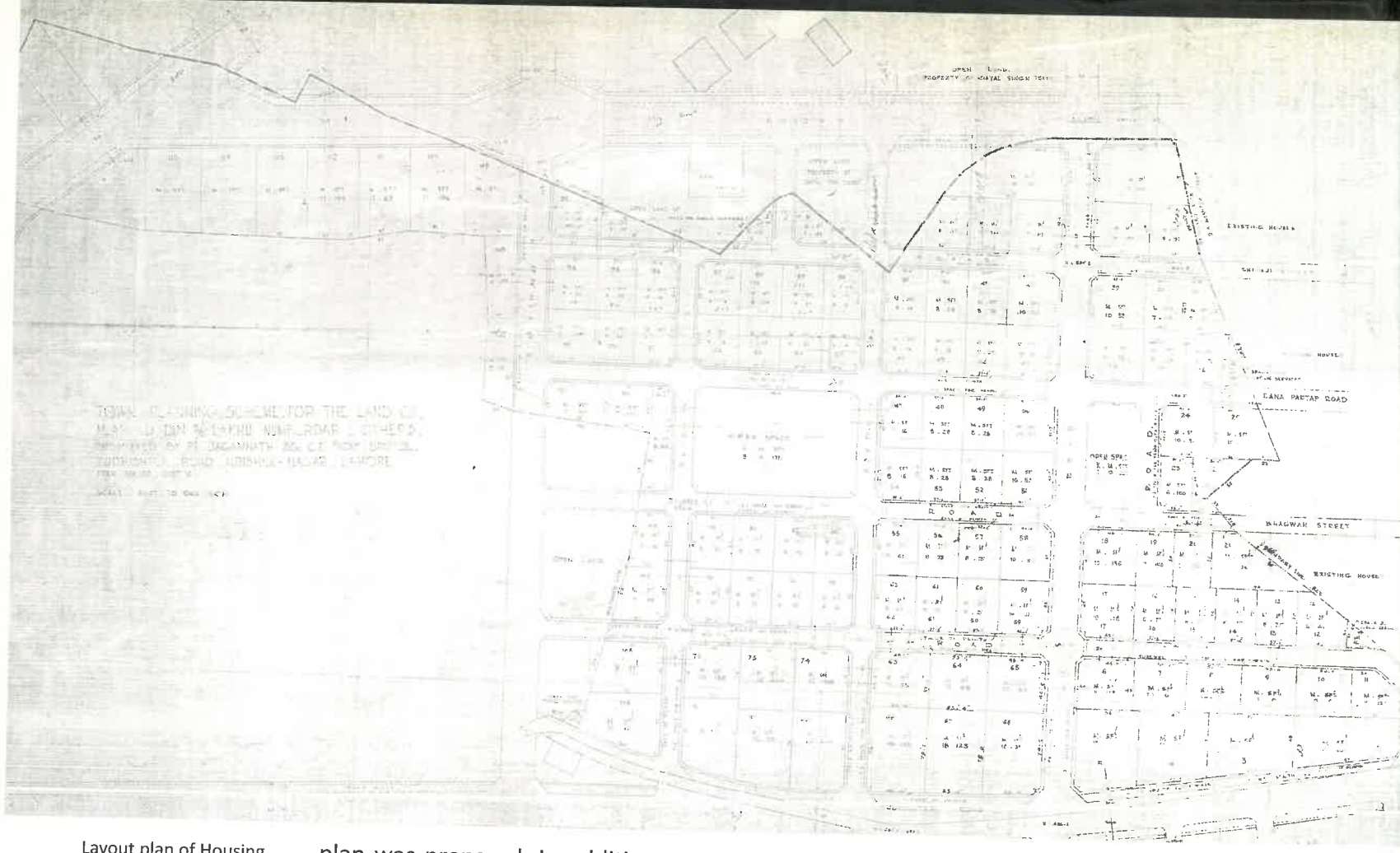
The next decade 1911-20 saw the completion of the Triple Canal Project (1905-17) which brought under irrigation millions of acres in the heart of Punjab. Prosperity increased and a large number of projects were initiated throughout Punjab. Owing to the enormous task of architectural design, a special post of consulting architect to Government of Punjab was created within the Public Works Department. Basil Martin Sullivan was appointed as the first chief consulting architect (Rehman et.al: 2012). He undertook some of the important projects in Lahore and a large number of schools, courts, administrative and hospital buildings rose up throughout Punjab as a result. The prosperity brought by the First World War led to great expansion of housing and other buildings. Labor was attracted to the city due to high wages, some engaged in the building industry and some in new industrial enterprises that sprang up during the war. During the same time, the Cooperative Societies Act was passed which enabled the development of Model Town and Muslim Town for high-income groups. The lower-income group settled in and around the Walled City, Gwalmandi and in the Mozang area. Similarly, to fulfill the shortage of housing for government officials, projects such as Government Officers Residence (for civil Bureaucracy and Mayo Gardens (for railway officials) were initiated. These schemes were planned on the Garden City concept.

In 1916, Patrick Geddes visited Lahore and proposed a comprehensive development plan for the city. On the day of Christmas, he wrote a letter to his son and described the existing situation in the following words:

> .... "What a gorgeous old city is Lahore: – far finer in building than anything we saw together though of course without the sublime slope and river and spirit of Benares, it is the heaped up, crowded lofty massing of centuries of Mohammadan empire's wealth and art. –No wonder Kipling's Kim is his best book! But it makes one sad and sorry to see what European and Anglicised India do to spoil it. – In some ways bombardment would be preferable to the electric light installations for instance, which is the most extraordinary bedevilment: Poles, wires, girders etc. can be capable of! (Wait till you see photos, if you think I exaggerate)."

The overhead cables badly damaged the streetscapes of Lahore. Basil M Sullivan, consulting architect, also complained about the presence of overhead cables on the walls of Wazir Khan Mosque. Prof. Geddes (1916) gave practical proposals on the improvement of public health, water supply and sanitation and landscaping of Lahore to bring back its former glory.

The conditions mentioned above continued throughout the twenties and early thirties. Between 1921 and 1931, the number of occupied dwellings in Lahore district increased by approximately 60%. The Walled City and the surrounding areas became more and more congested. Vacant land adjacent to the town in the southwest was taken up and new housing schemes of Krishan Nagar and Sant Nagar were planned and developed. The Walled City, which had been in abysmal condition since the Sikh period, received special attention. The first ever conservation



Layout plan of Housing Scheme at Krishan Nagar

plan was prepared. In addition, a comprehensive proposal was prepared to control encroachments on The Mall. Simultaneously, a scheme for the development of the Nila Gumbad area (King Edward Scheme) was developed and executed.

Housing continued to be the primary concern. The substantial increase in population led the government to establish Lahore Improvement Trust in 1936 in order to oversee the general condition of housing and other improvements in the city. It became clear that the Trust and the Municipal Council intended to enforce a stricter code of building. As a result, "the building industry got a sudden temporary flip when people made a special effort to get their houses finished before the regulations.....come into force, but later there was a big slump in building as houses could no longer be constructed unless the plan complied with the regulations." Town planning schemes were also drawn up, laying down minimum areas on which houses could be built in various localities; consequently many proposals for construction on land acquired for residential purposes were rejected.

The concern for housing and urban development in Lahore became more and more complex in the forties. A large number of private housing schemes were submitted to the Trust for approval. In order to scrutinize them properly and integrate them together, Aylmer Coates was appointed as town planner. He not only wrote a report on housing but also suggested a comprehensive land-use plan for Lahore. He suggested diverting all major industrial growth toward the Lahore Mint and reserving the area south of Lahore for the university. Byelaws were recommended for open areas. Aylmer stressed the need for a linear park along the canal. Several detailed area development schemes were prepared for vacant land in the city.

After independence in 1947, Lahore became the capital of West Pakistan and the Punjab province. To date, it remains the capital of Punjab and maintains its role as the cultural heart of Pakistan. Each historical period - pre-colonial, colonial and post independence - presents specific architectural design trends and therefore, Lahore may be said to present the tale of three cities.

After independence, urban planning activity in Lahore started in 1949 with redevelopment of areas within the Walled City. The Shahalmi Gate and areas north and west of Wazir Khan Mosque were burnt down in the riots of 1947. The Improvement Trust cleared these areas of the debris and constructed shops-cum-residential buildings on either side of a wide road to cater for future traffic. The original 15-foot main street was transformed into a new 80-foot dual carriage way with a central green strip. Most of this newly created space is, however, in the possession of shopkeepers and vendors and has been converted into an even busier commercial center. Presently parked cars in front of shops and goods vehicles create further congestion in the area.

The first two newly-developed schemes were Samanabad and Shadbagh in 1950. The only objective of these schemes was to solve the enormous housing problem, brought about by the influx of refugees. These schemes were meant for middle and low-income people. These schemes were planned on the British idiom. After Samanabad, a completely different project was started around 1952. The Gulberg scheme, as it was called, aimed at decreasing the housing shortage, but was explicitly meant for upper-income groups. This scheme initially did not receive much attention but subsequently it became one of the most expensive areas in Lahore. It consisted of six parts with a total area of 1,418 acres. The most attractive feature of the scheme was Main Boulevard, a 200-foot dual carriage way, flanked by greenery. Liberty Market and the adjoining park were two important features of the scheme. The scheme followed the building byelaws set during the British period. The Main Boulevard has now transformed into the main commercial-cum-office strip with 6 to 13-storey buildings on its either side. Similarly MM Alam Road, a residential artery, has been transformed into a modern "Food Street" with numerous restaurants and boutique galleries lining its sides. The two roads attract an enormous amount of traffic.

The next two schemes to be developed in 1958 were Wahdat Colony and Rehman Pura. Wahdat Colony was specially planned for low-income government employees. Since Lahore had become the capital of West Pakistan, people from various parts of Pakistan flocked to the main city. The housing shortage thus generated was alleviated to some extent by the development of the new schemes. In Wahdat Colony, for example, the houses were planned around wide roads with ample open spaces in the middle of residential blocks. Rehman Pura, on the other hand, was developed for low-income groups and contained smaller plots. The houses stood side by side with streets both on the front and back. The houses were constructed by the government and leased out on an installment basis.

In the late sixties, better standards were adopted in the planning of New Muslim Town and New Garden Town. These schemes planned 30 feet to 50 feet wide roads with an average plot size of 9,000 sq. feet. Muslim Town was more attractive owing to its proximity to the canal. The scheme had large open playgrounds. In addition, the plantation along the streets made it a peaceful settlement. Similarly Garden Town was planned between the canal and Model Town. Garden Town was comprised of two parts, one located along the canal and the other adjacent to Model Town. Both these segments were designed to have ample open spaces but provision of institutions of higher learning was overlooked. Government Superior Science College and Government College Wahdat Road were both built in the late 60s and a high school (Comprehensive High School) which was located adjacent to Punjab University, Quaid-e-Azam Campus was built in the early 70s.

Kot Lakhpat or Township scheme was the next housing development which was planned along modern lines for low-income groups. It consisted of one or two-room houses. It was aimed mainly at solving *katchi abadi* (squatter settlement) problems. Set up with American aid, it was designed by Doxiadis Associates of Greece. In spite of its rhetoric, it was not well adapted to cultural and environmental milieu. The scheme was away from the heart of the town, and not having employment opportunity nearby, it took a long time to get established.

At the same time, Central Jail was shifted to a new site located south of Lahore; therefore a new Shadman scheme was developed in its place to provide housing for middle and high-income groups. The plots facing the canal had the dual advantage of facing the greenbelt and running water of the canal. The scheme was developed by Housing and Physical Planning Department. The areas between the Mian Mir drain and Jail Road had smaller plots and therefore remained congested.

Allama Iqbal Town (a 1600-acre scheme) was developed in the south-west of Lahore. Construction started in the late seventies and early eighties to accommodate low and middle-income groups. Being the largest scheme of its time, it was developed like other schemes on a site and services basis. The smaller plots and narrow roads made some areas more congested compared to other schemes. The new housing society did not have a commercial center of its own; therefore, increased pressure was exerted on Ichhra which subsequently transformed into the largest commercial centre of Lahore. In the mid seventies, the Lahore Model Town Extension scheme was developed on land bought by Lahore Development Authority from Model Town Society. This scheme was not as spacious as Model Town since it was planned for middle-income groups. At

the same time, Faisal Town was developed to accommodate middle-income groups.

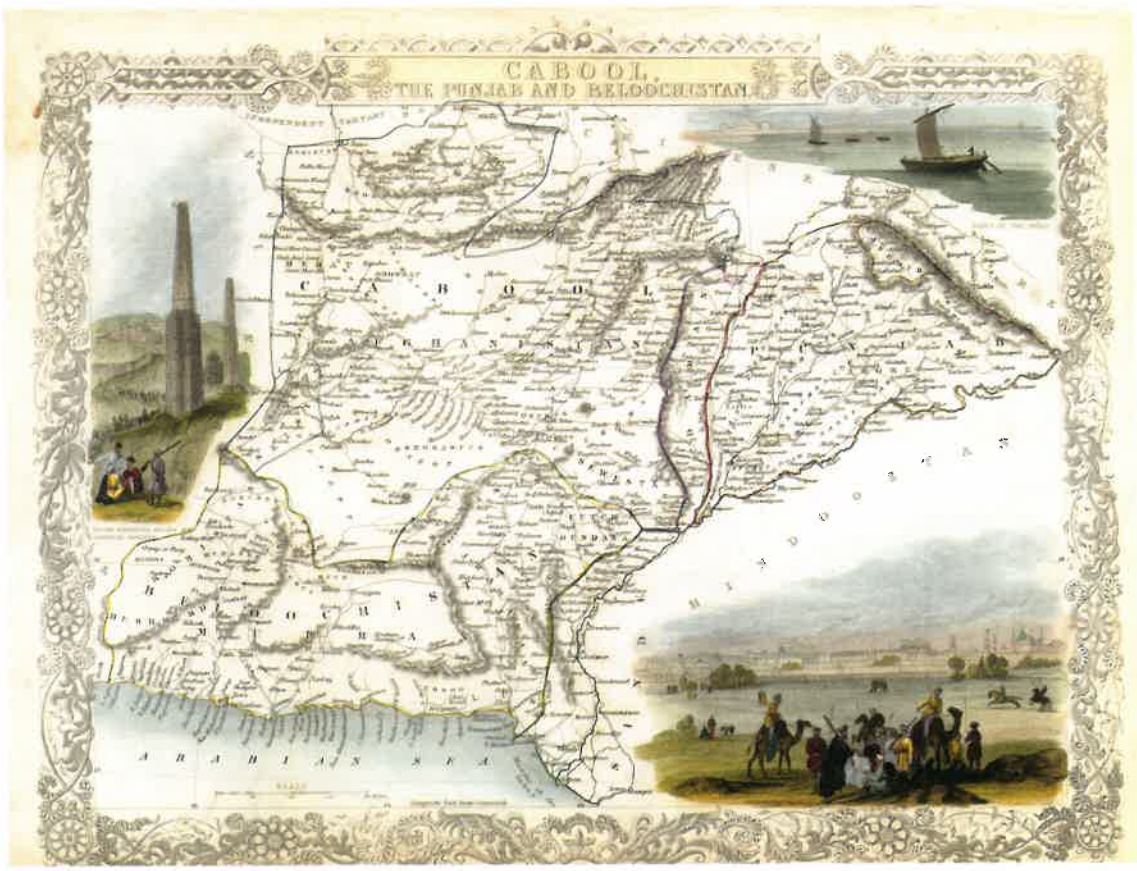
It was the 1980s which really saw tremendous growth in land development and urban expansion in the form of new housing schemes in the private sector mainly in the area between two major traffic corridors in the south. Because of the lack of new commercial areas there was enormous pressure on the existing commercial zones. Thus, existing roads in historic districts became commercialized, pushing the city to become agglomerated with growing traffic. Congestion increased manifold, pedestrian areas were wiped out and green spaces in the large houses were converted into commercial areas. Prominent examples of this phenomenon include major roads in Gulberg, Garden Town, Allama Iqbal Town, Gulshan-e Ravi and all important roads in colonial-period residential areas. Private schools located on main roads created increased traffic blockage at noon. Traffic problems became frequent due to insufficient capacity of roads and the situation continues today.

On March 19, 1975, The Lahore Cantonment Cooperative Housing Society (LCCHS) was established which was finally renamed as Defense Housing Authority (DHA) in 2002. The LCCHS, and later DHA, acquired and developed a large piece of land in the east and south side of cantonment to facilitate defense personnel. Only twenty percent of the land was reserved for civilians. DHA , for the first time, provided an all socio-cultural infrastructure facilities such as libraries, clubs, hospitals and parks and playgrounds to its residents. The building byelaws were strictly enforced and all sorts of encroachments were discouraged. Due to a well implemented property security system and high standards of maintenance of services, it is ranked among the most successful housing schemes in Lahore.

The real expansion of Lahore in different direction started in the 1980's. A large number of housing schemes came into existence along Multan Road and Raiwind Road and both sides of Canal Bank Road. The Johar Town, Gulshan-Ravi, Sabzazar Scheme and LDA Avenue I were developed in Public sector and the Canal View Cooperative Society, Eden Villas, Valancia Town, and WAPDA Town Cooperative Society were developed in the private sector. Most recently Bahria Town, Falcon Society and Lake View Cooperative Society were developed that have wide roads, ample open spaces.

The most recent projects of Ring Road and Bus Rapid Transit system will open up avenues for the development of new housing schemes up to Kasur on both sides of Ferozpur Road. The residents of these schemes without proper infrastructure development planning will eventually rely on the socio-cultural facilities and economic activities of the city center of Lahore. Within the given situation it is extremely important that master plan of Lahore and greater urban region may be revised and new visionary document may be produced for the sustainable and equitable development of Lahore and suburban region.

Geographical and Traveler's Map of Lahore Suba, District and Grand Trunk Road



Ghazni & Lahore Map showing view of Walled City of Lahore on lower right corner.

Akbar divided the Mughal Empire into *subas* (provinces). The Lahore and Multan Suba of the Mughal period was coralived during British period and formed Modern Punjab. Lahore *Suba* consisted of six *sarkars* which were the *doabs*, or interfluves, between the major rivers of the region. The six *sarkars* were the Beat Jalandhar doab, the Bari *doab*, the Rachna *doab*, the Sind Sagar doab (Rehman, 1997a, 15). The Multan *Suba* consisted of territories of lower Punjab including Cholistan. Each *sarkar* was divided into *Mahal* and *Parganna* for territorial and fiscal purposes (Singh, 1992; Akbar, 1985; Saran, 1988).

The British redefined the boundaries of the provinces. The Lahore and Multan subas became part of the Punjab province. For administrative reasons, the province was divided into divisions, districts and tehsils. Be it Lahore Suba of the Mughals or Punjab province of the British, Lahore maintained its position as capital of the province and headquarters of the division, district and tehsil. After independence, the Punjab province was divided into east Punjab and West Punjab. The east Punjab went to India while the west Punjab became part of Pakistan. The maps in the following pages describe the geographical boundaries and important settlements within these administrative units.

Map of Lahore Suba

Map of Lahore Suba by Jeam-Baptiste-Joseph Gentil (opposite page)

Jean-Baptiste-Joseph Gentil, who came to India as ensign of the French army and took part in the campaigns of South India against the British, got inspired from Indian history, art, culture, geography and religion. After the defeat of French army, he travelled north and eventually joined the court of Shuja ud Daula, Nawab of Oudh at Faizabad, the capital of Oudh and remained there for ten years from 1765 to 1775. One of the important works he undertook was the translation of the geographical part of *Ain-i-Akbari* describing the *subas* of Mughal Empire. He then drew the maps and filled the names of places mentioned by Abul Fazl. He named his work "An Atlas of Mughal Empire (Susan Gole, 1989:98)." Some of the important historical places such as Punj Nagar (Modern Sheikhupura) are identified by *Ain-i-Akbari* although they no longer exist today.

The map shows the territory of Lahore Suba lying between five rivers. A tract of land between two rivers is known as *doab*. Therefore, five *doabs* are mentioned in the map. The area between the Sutlej and Beas is Jalandhar *doab*, between the Sutlej and the Ravi is Bari *doab*, between the Ravi and the Chenab is Rachna doab, between the Chenab and the Jhelum is Chenhat or Chaj *doab* and finally the area between the Jhelum and the Sindh is Sindh Sagar Doab. According to *Ain-i-Akbari*, Lahore Suba is situated in the third climate and its length from the River Sutlej to the Sindh River is 180 *kos* (*kos* is a distance of measures roughly equal to two English miles). Its breadth from Bhimber to Chaukhandi (a dependency of Satgarah is 86 *kos*. It is bounded on the east by Sirhind, on the north by Kashmir, on the south by Bikaner and Ajmer, on the northwest by Kabul, and on the west by Multan.

The culture, tradition and religion of India impressed Jean Baptiste to a great extent and this may be seen on the images drawn on the margin of the map. He employed three Indian artists to provide him with miniature paintings illustrating such traditions. This is the first time in Indian history that cartography and socio-cultural activities are shown simultaneously in one drawing.

Souba de Lahor

Souba De Cachemer

Douaba

Douaba

Douaba

Douaba

Douaba

Cercar

Cercar

Cercar

Cercar

Cercar

Sind

Sagar

Dje het

Ratchena

Bari

Best

Djalander

Souba

Souba

Souba

De moultan

Lahor

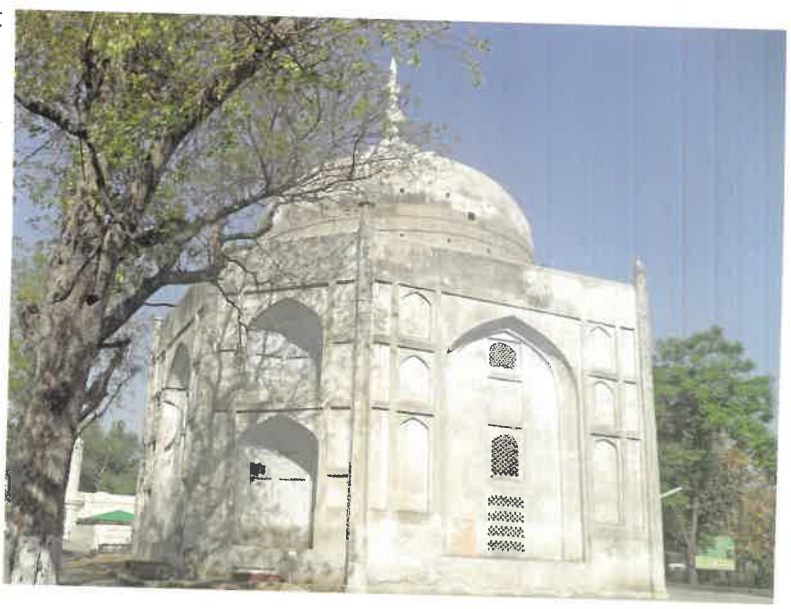
Delly

Part of Route Map of Lahore from Shah Ganj to Shahdara

Around 1790s, an unknown traveler travelled from Agra to Kandahar and sketched all the important geographical, architectural and landscape features along the entire route of Grand Trunk Road. In this journey, he sketched towns, gardens and all other elements which used to be important landmarks (Gole, 1989: 98).

Middle terrace Shalamar Garden, Lahore (above)

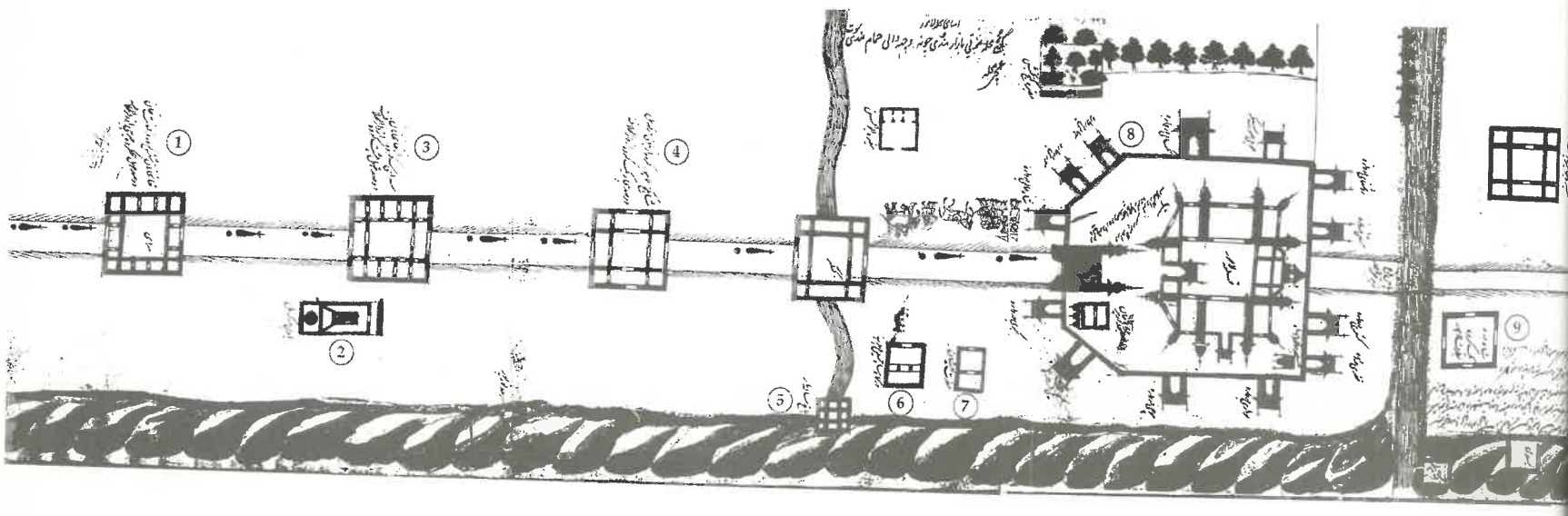
Tomb of Hazrat Eishan (right)



The first important settlement on the east of Lahore was Shah Ganj. Moving further towards the Walled City one crossed the canal built by Ali Mardan Khan and reached the Shalamar Gardens. After crossing the canal, the first monument on the left was the tomb of Abul Hasan while on the right was that of Dargah Shah Husain. Moving further one came across the tomb of Hazrat Eishan. The next destination was the Walled City of Lahore, the *dar ul khilafa* (Rehman, 1997a: 172).

Among all the gates within the Walled City, Delhi gate is seen as monumental and imposing. Akbari Darwaza is shown on the left side. The fortification wall has two chamfered corners on the north-eastern and south-eastern sides. Bhati and Mori gates are shown on the southeastern side. Taxali Gate and Haveli Surat Singh are shown on the southern side. Roshnai Gate and Masti Gate are pierced within the western wall on the southern side of

Map of Grand Trunk Road by unknown traveller



the fort. The northern side has Lohari and Mochi gates. Two mosques within the Walled City are also shown. The first is Wazir Khan Mosque close to Delhi Gate while the other is the mosque of Jahangir Badshah *i.e.,* Begum Shahi Mosque. The author has mentioned the names of all the gates but has confused their locations.

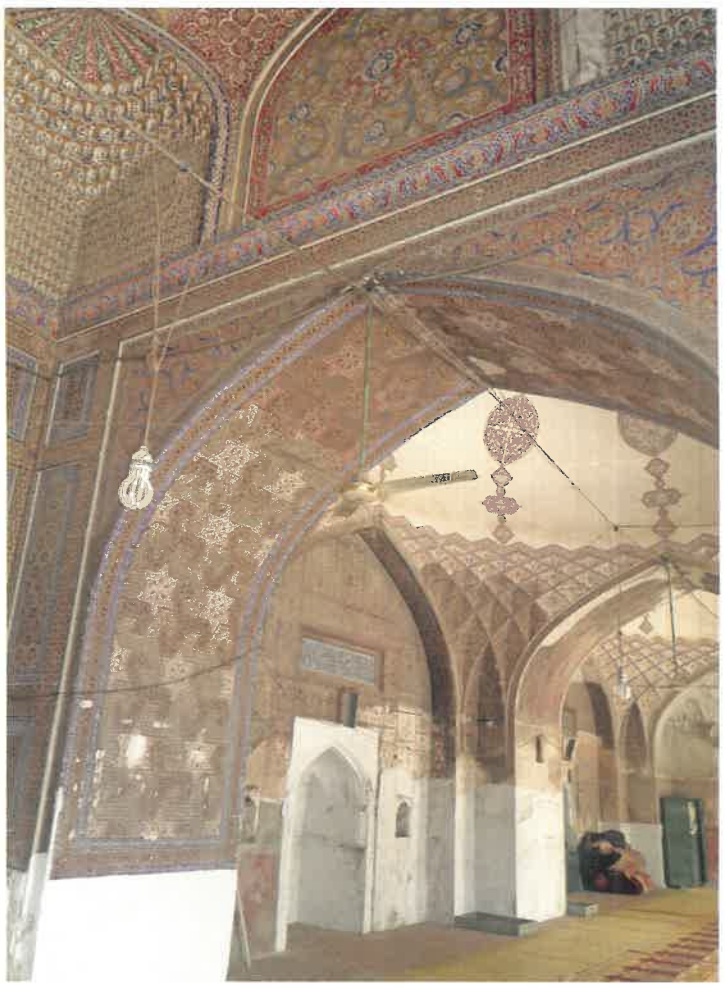
After crossing the Walled City, the next important geographical landmark was the River Ravi. Beyond the River Ravi lay the settlement of Shahdara on one side and the tomb of Jahangir on the other. After crossing Shahdara, the next important halting station and last point on this part of the map is Sarai Elchian.

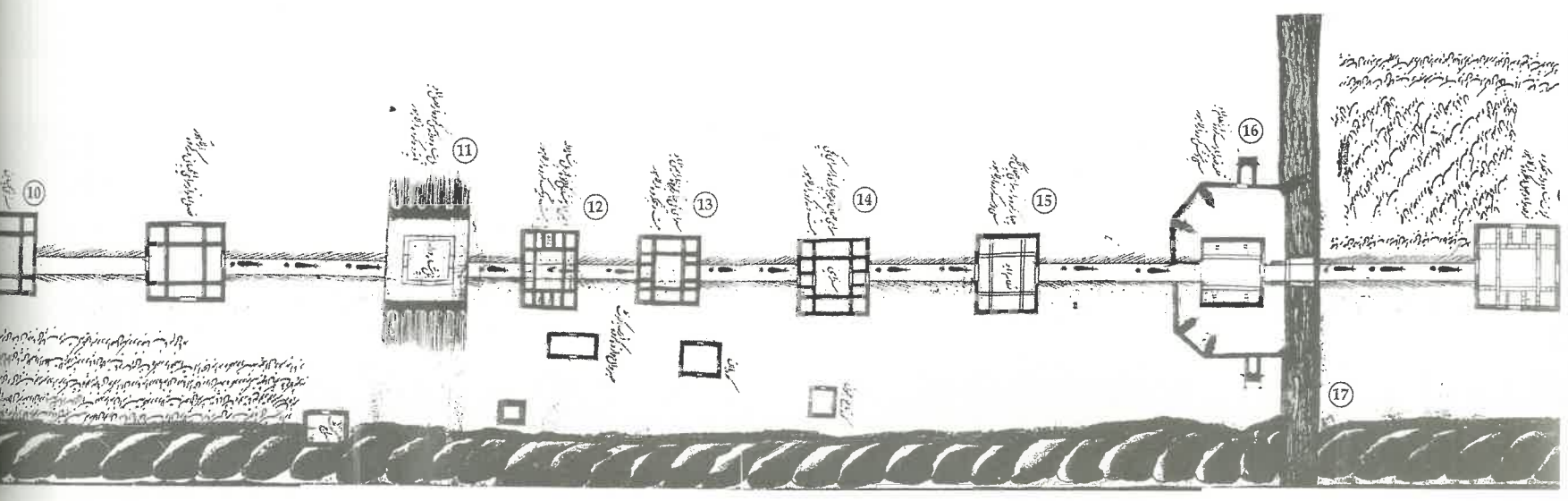
Ghulabi Bagh gateway (top left)

Tomb of Dai Anga (top right)

Interior view of Maryam Zamani Mosque (center left)

Frosco painting in the interior of Maryam Zamani Mosque (center right)





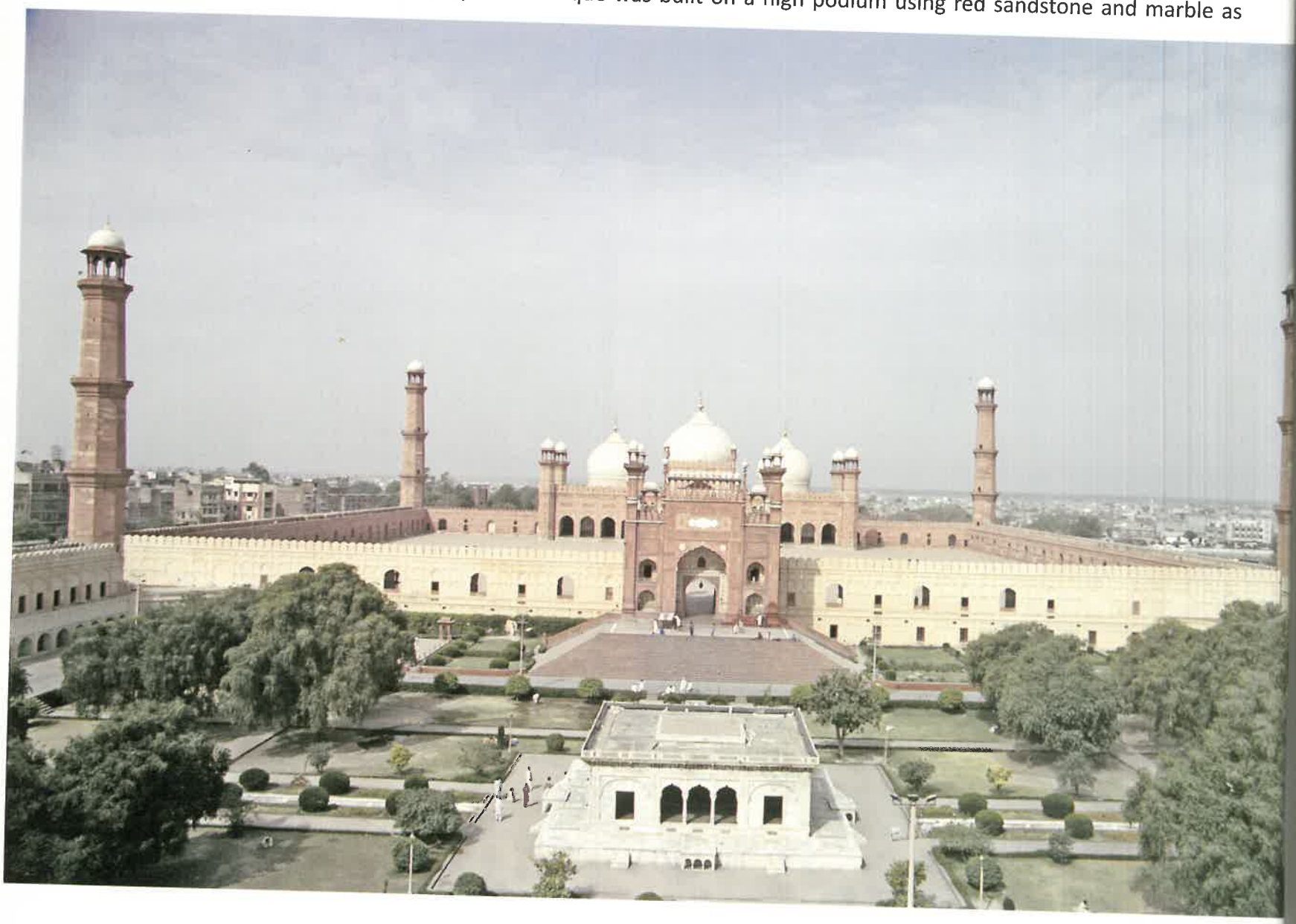
Late Sikh Period Elevation of Walled City of Lahore

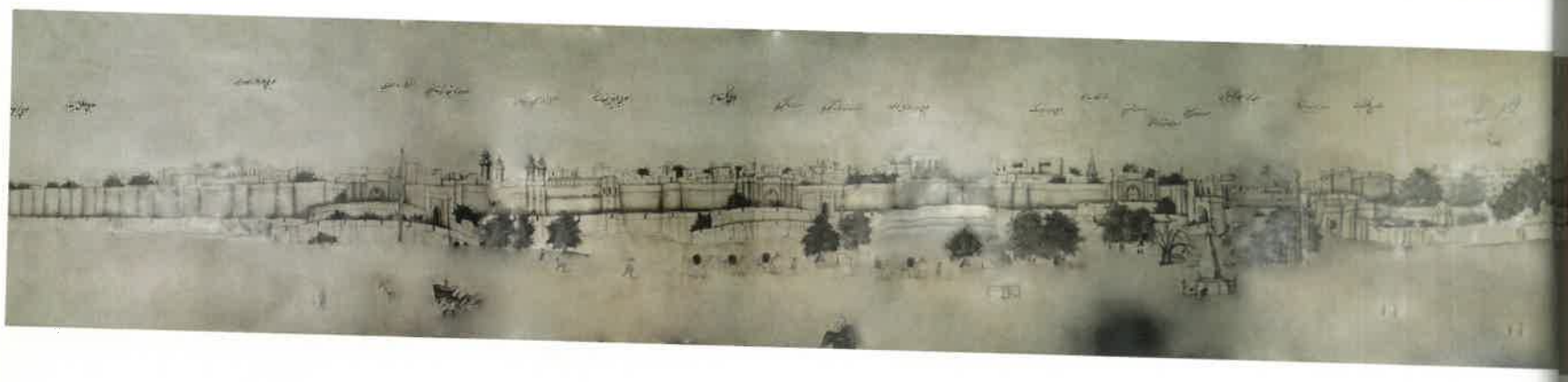
During the Sikh period, a detailed north elevation of the Walled City of Lahore was prepared in pen and ink. Later, a number of copies of this elevation were made. This elevation begins from Taxali Gate and ends at Khizri Gate covering the Lahore Fort and the Walled City (SDWCLP 2009: 58-59). The elevation gives a clear sense of construction density, architectural character as well as the skyline of the buildings. It is obvious from the sketch that each entrance gate comprised inner and outer gates. The gates did not face each other directly but were placed slightly away to achieve a crooked entrance. In addition, all important Sikh period *havelis*, mosques and gurud-waras are shown in the sketch and labeled in the Urdu language.

Taxali Gate was named after the mint (Taxal) of the Mughal period which used to exist in the neighborhood on the northwestern side of the Walled City close to the gate. The picture shows the tower flanking Taxali Gate. The river used to flow close to the fort. Taxali Gate Masjid, a beautiful mosque of Shah Jahan's period, also existed in the vicinity and is shown in the fore-ground. Mori Gate was a small opening from the Walled City on to the river front and was made to approach the river from the Walled City. It was probably built during the Sikh period.

Badshahi Mosque Lahore with Hazuri Bagh in the foreground

Badshahi Masjid: The Badshahi Mosque was built by Emperor Aurangzeb Alamgir in 1673 AD (Chughtai 1972). This mosque was built on a high podium using red sandstone and marble as





finishing material. It remained the largest mosque in the world until recent times. In the image minarets of the mosque are shown without domes. The River Ravi used to flow in the northwestern corner of the mosque. The *Smadhi* of Maharaja Ranjit Singh and shrine of Arjun Mal were located on the northern side of Badshahi Mosque. Arjun Mal was the fifth guru of the Sikh faith. He is credited with having arranged the writings of his predecessors known as Adhi Garanth, a principal scripture of Sikh religion. Maharaja Ranjit Singh was the last monarch of Sikh rule in Punjab. His mausoleum is an important example of Sikh architecture which draws its inspiration from both Hindu and Mughal architecture. The tomb is externally plastered while internally the soffit of the dome is decorated with mirror work. The doorway has images of Hindu deities of Ganesh Devi and Brahma carved out in red sandstone and profusely decorated using different materials furnishes and techniques.

Gateway of Badshahi Mosque Lahore

Gateway of Badshahi Masjid: The gateway of the Badshahi Mosque dominates the skyline and can be seen on the rear side of the wall. The plinth of the mosque is 20 feet high while the gateway is 65 feet high from plinth level. The gateway is imposing and incorporates an inscription which shows that the mosque was constructed under the supervision of Fidai Khan Koka.

Roshnai Gate: Roshnai Gate is located between Badshahi Mosque and Lahore Fort and provided access to the city from Lahore Fort. It was used extensively by elites and important personalities and therefore was lit up profusely throughout the whole night. It was thus named Roshnai Gate.

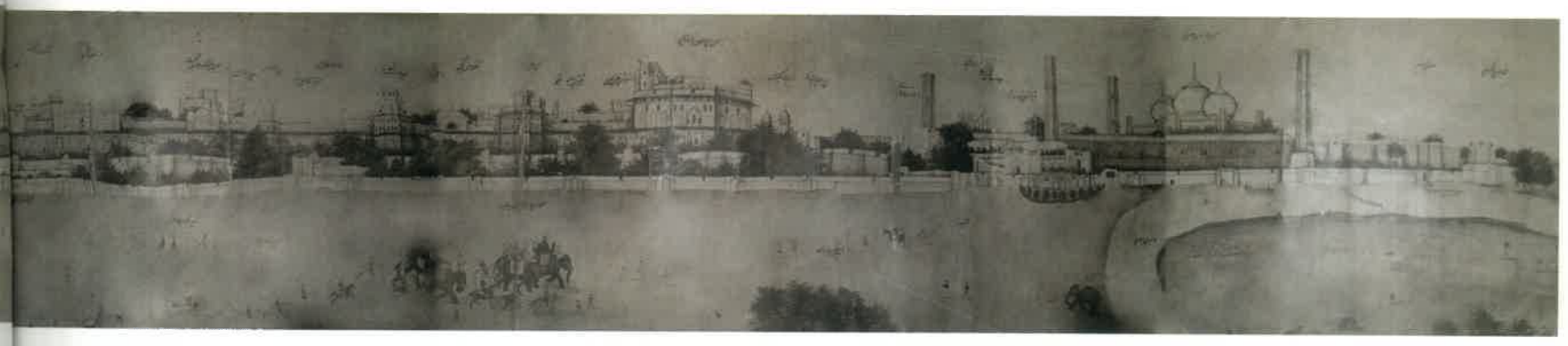
Saman Burj: Saman Burj is one of the most important structures of Lahore Fort. It is located on the extreme northwestern corner of the fort. The Mughals called it Shah Burj. The project was started during the reign of Jahangir and completed during the reign of Shah Jahan. The basement and halls above are highly fascinating with Shish Mahal being decorated with convex mirrors and fresco paintings, making it one of the unique specimens of the history of Mughal architecture.

Deori Saman Burj: The forecourt of Saman Burj is located east of Shah Burj while entrance to the forecourt lies on the southern side. The entrance gate is beautifully decorated with fresco paintings.

Lal Burj: This tower was built in fair-faced brickwork. The structure was built during the reign of Jahangir. The drawing at this point shows an English Lord sitting on an elephant and progressing towards Roshnai Gate. He is followed by his companions.

Bangla Arz Begi: This structure in the form of a Bengal hut is situated in the middle of the outer edge of Paien Bagh. From here one can view the riverscape and the landscape beyond.

Late Sikh Period Elevation of walled city of Lahore



Baghicha: The area on the eastern side of the forecourt is a *Paien Bagh* or ladies garden. The artist is well aware of the fort and has depicted all the actual functional spaces located behind the outer wall of the fort.

Shish Mahal: Lahore Fort (top left)

Paien Bagh: Lahore Fort (top right)

Kala Burj: Lahore Fort (center left)

Khawabgah-e-Shahjahani, Lahore Fort (center right)

Smadhi Bhai Waste Ram (bottom)

Kala Burj: This *burj* like Lal Burj was built during the reign of Jahangir. The soffit of the dome contains some of the finest fresco paintings of Jahangir's period executed in Christian themes.

Khwabgah Sang-e- marmar (Khawabgah Shah Jahan): The drawing shows that khwabgah was finished with marble. The next building overlooking the river is Diwan-e-Khas constructed entirely in marble. Khwabgah Shah Jahan is located on the southern side.

Smadhi Bhai Wasti Ram: Bhai Wasti Ram was the spiritual guide of Maharaja Ranjit Singh. The Smadhi was located outside Lahore Fort. This beautiful structure incorporated large accommodation areas and was finished in white marble. It is an important monument of Sikh architecture.

Burj Sarkaran of Haveli Sarkaran: This particular structure is located in the north-western corner of Jahangir quadrangle.

Haveli Chand Kor Balai Takht (The upper story of *haveli* Chand Kor). This *haveli* was built in fair-face brickwork during the Sikh period. It is the tallest structure in Lahore

Fort. The building presently houses artifacts of the Sikh period.

Jahangir Quadrangle, Lahore Fort

Khwabgah Kalan (Jahangir): The Khwabgah–e-Jahangir is located along the perimeter wall and faces Jahangir quadrangle and Diwan-e-Am beyond. Khwabgah has seen many changes during the Sikh period. It was built in brick masonry. Presently, the building is used as a museum and contains Sikh miniature paintings as well as a manuscript gallery.

Thakar Dawara Bar Takht Bangla: This Bengali hut is located on the eastern side of Khwabgah-e-Jahangiri. There used to be a similar hut on the western side. The structure is internally decorated with fresco paintings of the Sikh period.

Haveli Sarkaran-e-Kashmir: The *haveli* is located adjacent to Diwan-e-Aam. The building is double-storied and was built in brick masonry using lime mortar. Presently the building houses a library on the ground floor and offices of Northern Circle of the Department of Archaeology on first floor.

Mahal-e-Akbari: Akbari Mahal was once located east of Diwan-e-Aam. The remains of the building can still be seen. During Mughal and Sikh periods, horses of ruling elite and important nobles used to be kept within Lahore Fort.

Tavela Akbari: There were a number of *tavelas* in the Walled City. These tavelas were maintained by important nobles and elites. These buildings no longer exist but the drawing mentions the site of the *tavela* within Lahore Fort.

Shah Burj Qila: Monumental corner tower of the fortification wall of Lahore Fort.

Bagh Mirza Mazhar Ali Beg.

Darwaza (Gate): The majestic Masjidi or Akbari Gate of Lahore Fort was built during Akbar's period. It was the principal entrance to the fort from the Walled City. This grand entrance is flanked by towers.

Masjid Maryam Zamani: The mosque was built during the reign of Jahangir by his mother Maryam Zamani in 1023 AH

Masjid Maryam Zamani (Jahangir Period: 1614)

(1614 AD). It was the largest mosque of the city until the construction of Wazir Khan Mosque. The mosque is surmounted by three domes. The interior of the mosque is decorated with fresco paintings in floral design.

Darwaza Berun Masti: The Walled City was surrounded by a double defensive wall. The interior and exterior gates did not face each other in order to maintain security. The outer gate was on the western side while the main gate was slightly on the eastern side.

Masti Gate: Masti Gate was an important gate of the Walled City. It was located close to Masjidi Gate or Akbari Gate of Lahore Fort and provided access to Haveli Asif Khan, the Walled City and beyond.

Shawala Ghulab Rai: The Shawala is named after its founder who was *Jamadar* in the reign of Ranjit Singh. It is situated inside Masti Gate behind Haveli Jamadar Khushal Singh. The building was built in solid masonry using brick and red sandstone as cladding material. It is surmounted by a large gilded dome.

Haveli Teja Singh: Teja Singh Haveli is situated inside Masti Gate adjacent to the main bazaar

Haveli Dhyan Singh Walled City, Lahore (left & right)

leading to Kotowali. It has been demolished and made a part of a girls college. Close to it is said to have been Ali Mardan Khan's haveli. It once had a very fine courtyard with fresco paintings all around its perimeter wall. Haveli Jamadar Khushal Singh was the largest *haveli* in the Walled City. It is double-storied with a large and spacious courtyard. The entrance gate is most imposing with towers on its either side. Presently it is the largest *haveli* within the Walled City. It has been converted into Nawaz Sharif Girls College.

Darwaza Tehwar Kot Kashmir: This is the outer Kashmiri Gate.

Sheranwala Gate: Walled City Lahore

Kashmiri Darwaza: Kashmiri Darwaza was named thus because it faced Kashmir. These gates had archways but the exact design in not known. The fortification wall and all the gates were pulled down during the early British period.

Haveli Bhagat Ram: Haveli Bakhshi Bhagat Ram was situated behind the kotowali in a *kucha* named after its founder. Bakhshi Bhagat Ram was Adjutant General of the armies of Maharaja Ranjit Singh. He also built a *shawala* in the vicinity.

Masjid Wazir Khan: Masjid Wazir Khan is an important landmark and a jewel in the history of architecture of Lahore. The mosque is a fine specimen of both art and architecture. The mosque was designed following Persian tradition and was profusely decorated with *Kashi Kari* and brick imitation in the exterior and fresco paintings in the interior. The epigraphy in the interior and exterior of the mosque describes completely philosophy of life. It was the earliest mosque of Lahore where minarets were constructed on four

corners of the mosque.

Darwaza Khizri: The gate was named after Khizr Elias (Phineas, a companion of Moses), the patron saint, according to popular belief, of water and streams, and discoverer of water of immortality, Ranjit Singh kept two domesticated lions at this place, therefore it was also known as Sheranwala Gate.

Haveli Sardar Ahluwalia: Sardar Ahluwalia was Raja of Kapurthala. He maintained a *haveli* near Khizri Gate and a mansion near the tomb of Mauj Darya Bukhari. The garden was known as Kuri Bagh.

Haveli Khan Bahadur: There is not enough information available as to who the Khan Bahadur really was. It may be presumed that he was Khan Bahadur Kanayal Lal who owned a *haveli* between Chitta Darwaza and Delhi Gate. The *haveli* had a Shish Mahal on the upper-most storey which provided views of landscape beyond the city wall.

Shah Burj Darwaza: The city gates were flanked by massive towers. The sketch shows the massive *burj* of Yakki or Zaki gates.

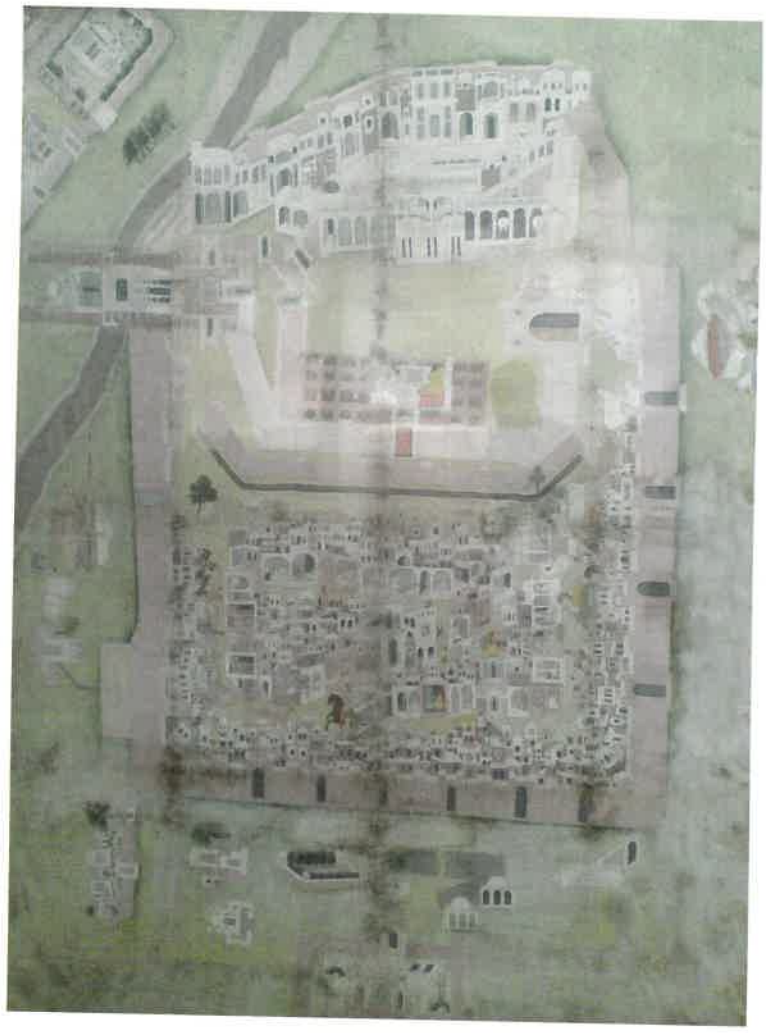
Lahore City and Fort (Pahari-Sikh Painting; c.1825)

This oeuvre, located in Maharaja Ranjit Singh Museum, Amritsar, is remarkable in terms of its quality and minute details. The image was not meant to be viewed from one fixed angle; it has to be turned slowly, or one has to go around it oneself, for the perspective to fall in place, for one to be able to make sense of conception. There are a few things which are viewed straight, others by moving right or left; some are seen at eye level, others from a height, affording a balcony view, as it did. Once, these strategies of viewing are worked out, one can delightfully experience this delicate painting. There is no specific focus or moment, time of the day or occasion, that the painter sets out to capture here; it is intended to be a generalized, abstracted view of the Walled City of Lahore and the tenor of the life that one sees in it. The Walled City is full of activity, much coming and going which the painter wanted to tell us.

In the streets, men walk about, riders move on horseback, state elephants are being led; carts and asses carry goods about. Inside their open fronted shops, men are busy plying their trades: perfumers, goldsmiths, money-lenders, bow makers, cloth merchants. At one place, the painter also introduces the face of a woman in the balcony of a house. Public buildings and residences are all densely packed. In contrast, the spaces in the Lahore Fort are far more open. It has well laid out gardens, with regular patterns of flowers, courtyards and colonnades, a stable with only the hind quarters of horses tied in them.

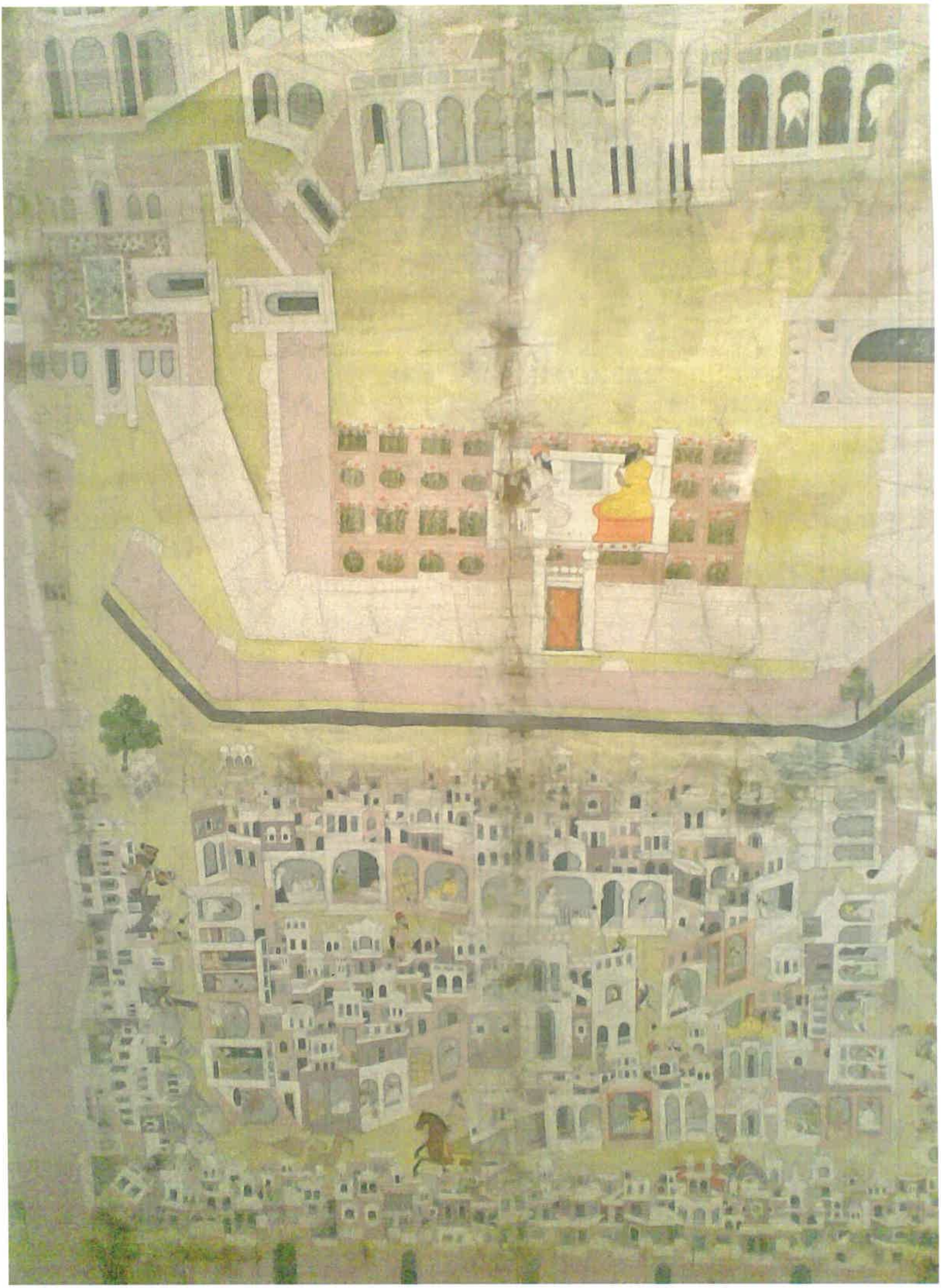
Historic monuments such as mosques and tombs and other domed structures, which dot the city, are interspersed throughout the city (Aijazuddin, 1993:21). The most pleasing, and skillfully rendered, of all vignettes in the work, however, are those brought in outside the Walled City, where the Ravi flows. Here a wonderfully organized, and a colorful encampment makes its appearance, a group of camels sits huddled together; a range of wooden stakes standing in the water hug the bank of the river. Across the river the artists has shown a group of Shahdara monuments.

In fact, the artist tried to capture the urban culture as well as architectural character of the historic city of Lahore in a poetic way.



Pahari-Sikh Painting: c.1825 of Lahore City & Fort

Detail of Pahri-Sikh Painting c.1825 of Lahore City & Fort (opposite page)



A Panorama of the Walled City of Lahore

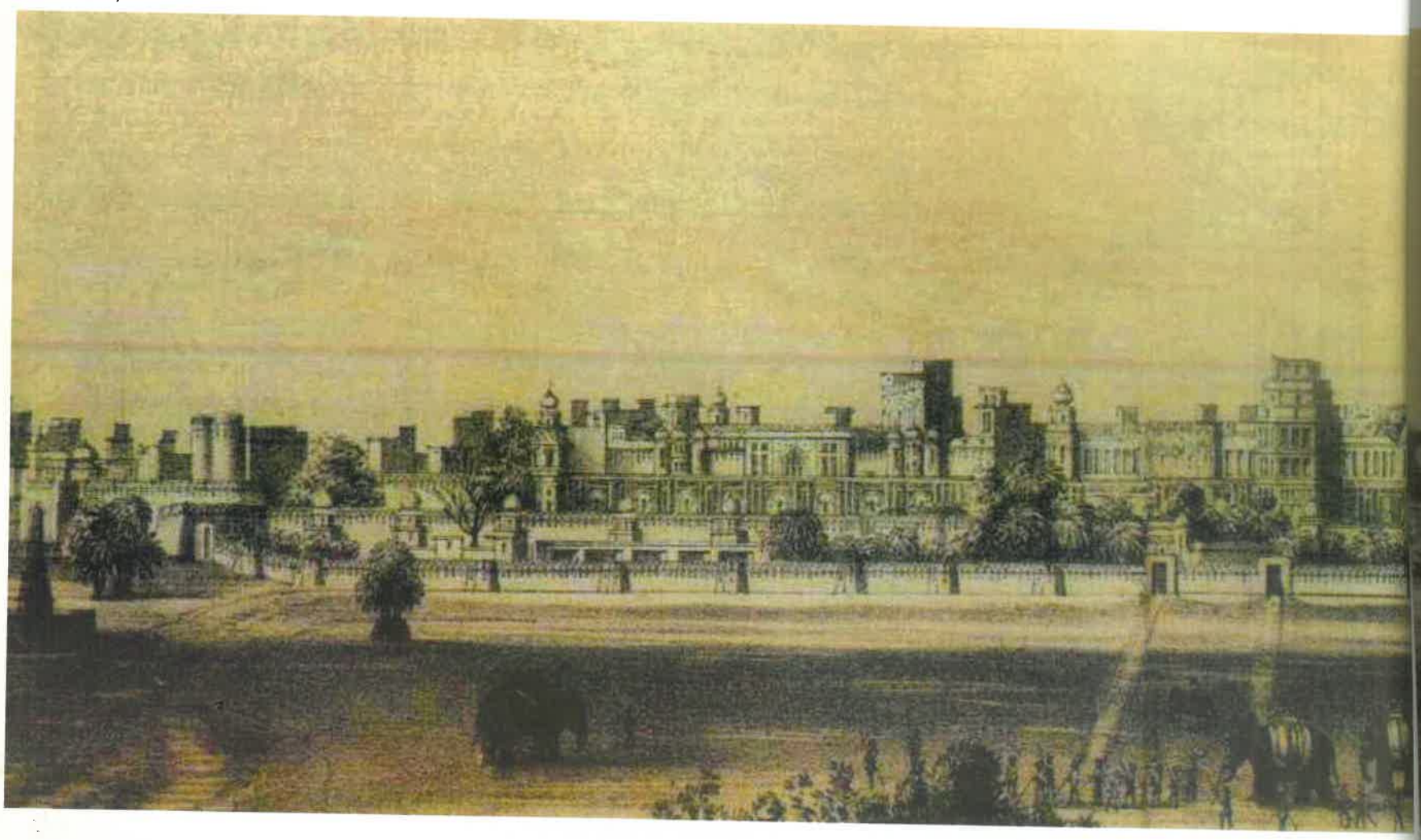
In 1852, Dr. Honigberger, a European doctor who lived in Lahore for a total period of almost fourteen years (between 1829 and 1849), published a panoramic view of Lahore (plate XV) done by a local artist in a fascinating memoir of his service at the Sikh court. The spectacular view that would have caught the attention of every visitor who approached Lahore from the northwest was beautifully depicted in the sketch. The sketch shows the towering minarets and bulbous domes of Badshahi Mosque, elegant mansions of Lahore Fort and *havelis* of the Walled City. The scale of the fort wall and height of the buildings must have stunned visitors approaching the city. The open area in the foreground was cleared for use by Ranjit Singh as a parade ground which is apparent from the movement of troops. The ground was subsequently adopted by the occupying British as Lahore's first racecourse. On the right is the branch of the River Ravi that flowed during the monsoon near the fort walls. The panoramic view covered the stretch of buildings between Masti Gate in the east and Badshahi Mosque in the west.

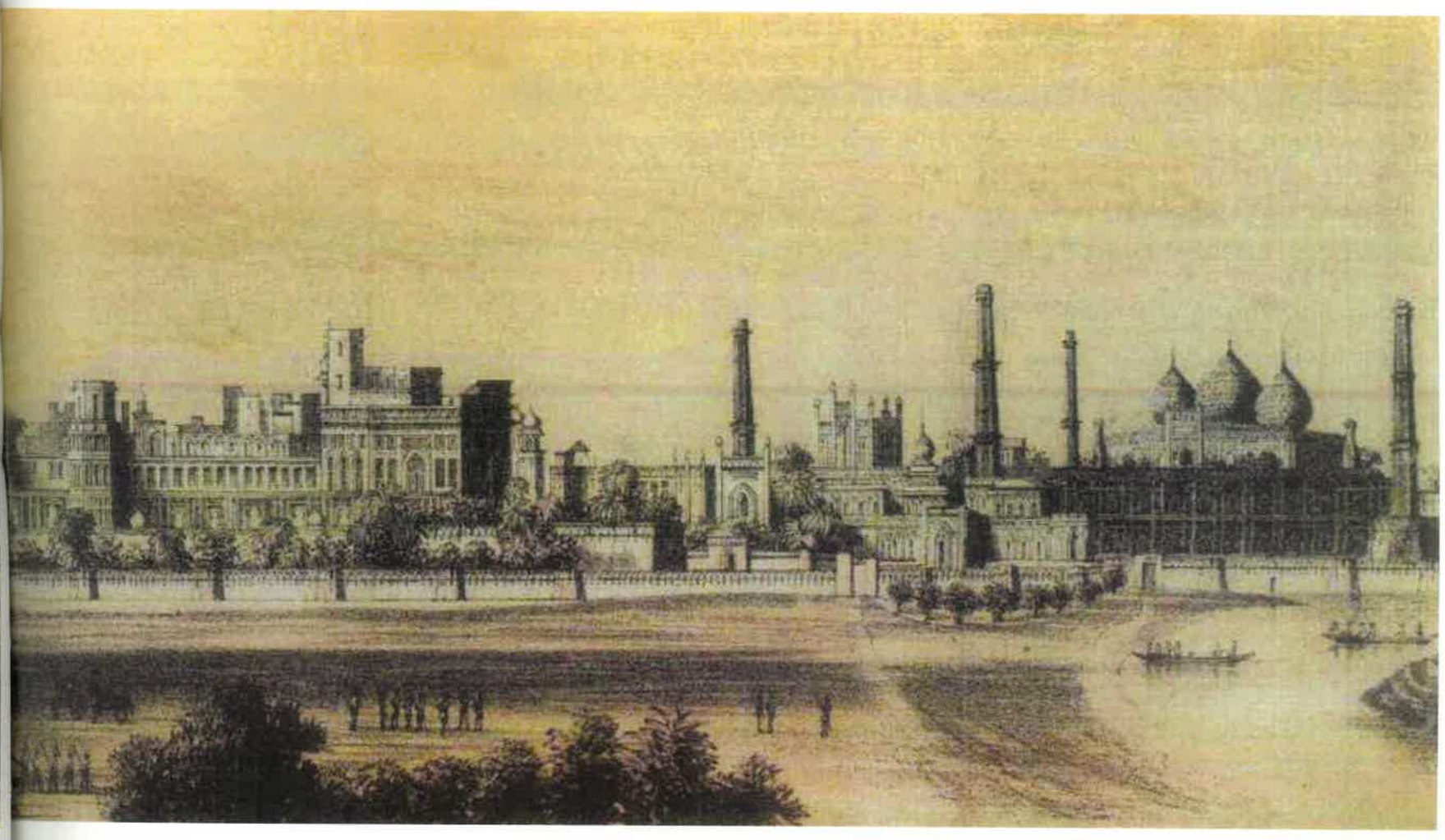
North facing wall of Lahore Fort (opposite page)

In 1845, Henry Lawrence published "Adventure of an Officer in the service of Maharaja Ranjit Singh" in which he described the Walled City looking from northwestern corner in the following words:

> "The entrance of the town from the northwest is picturesque and pleasing; even at the commencement of hot season, there was a green hue about the banks of the Ravi, contrasting strongly with the huge town in its immediate vicinity.... The old town is encircled by a strong and handsome wall, enclosing also some new grounds...The wall is, throughout the greater part of its extent, fronted by a fausse-braye, and a deep, though narrow ditch, there are twelve gates and as many wickets, each of the former having a double entrance, so that if any adversary did force the outer gate, he must pass through a flanking fire before reaching the second."

Panorama of the Walled City of Lahore





Map of the Lahore District

During the British period, the province of Punjab was divided into districts, *tehsils* and *zails*. The city of Lahore was the headquarters of the Lahore district which comprised Lahore, Kasur, Sharakpur and Chunian tehsils. The River Sutlej formed the border of Kasur and Chunian Tehsil. Lahore, being an important place, was connected with all other districts.

On the east, three roads are shown connecting with Gurdaspur, Amritsar and Jalandhar. On the south it is connected with Ferozepur.

The map shows that Lahore tehsil contained 14, Kasur 13, Sharakpur 10 and Chunian 14 *zails*. The zail headquarters were important villages in the suburbs of Lahore and mostly comprised agricultural land. The following zails fell within Lahore tehsil: Awndhalwala, Bhasin, Manhal, Bhangali, Ghawind, Shahdara, Lahore, Dholanwal, Ichhra, Kacha, Niazbeg, Halloke and Khudpur.

Kasur tehsil was comprised of Sursing, Patti, Sitonoabad, Hardo Ulgon, Dasuwal, Sajra, Wan, Kasur, Luliani, Hardo Bahari, Jaura, Burj Khurd and Sattoke zails.

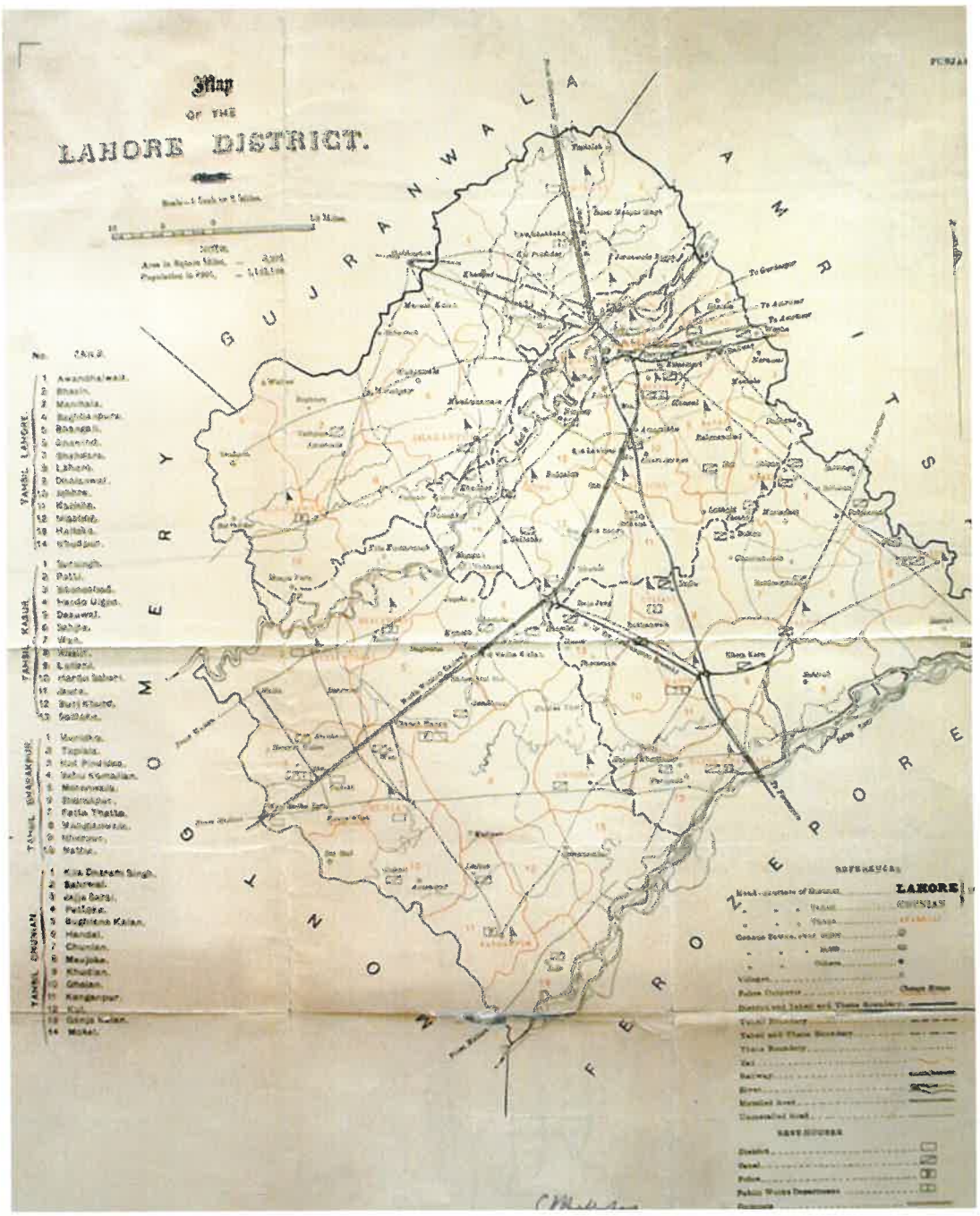
Sharakpur tehsil was comprised of Muridke, Tapiala, Kot Pindi Das, Sahu Kamalian, Moranwala, Kharpur, Natha zails.

Finally, Chunian tehsil was comprised of Kila Dharamsingh, Bahrwal, Jajasaral, Patoke, Bughlana Kalan, Hanbal, Chunian, Maujoke, Khudlan, Ghelan, Kanganpur, Kul, Ganja Kalan and Mokal zails.

The total area of the district was 3,678 square miles with a population of 1,109,100 in 1901.

Map of Lahore District

Detail map of Lahore & neighbouring Districts (opposite page)



MAP of the P. W. D. PUNJAB

To accompany the Administration Report of the Punjab for 1930-31.

DISTRIBUTION MAP OF PUBLIC WORKS DEPARTMENT, BUILDINGS AND ROADS BRANCH, CIRCLES AND DIVISIONS AND THE DISTRICTS INCLUDED IN THE P. W. D. CHARGES 1930-1931

LIST OF MATERIAL BRIDGES IN CHARGE OF PUBLIC WORKS DEPARTMENT, BUILDINGS AND ROADS BRANCH (1930-31)

Sr. No.	Name of Road
1	Grand Trunk Road
2	Lahore-Jandiala (Amritsar)
3	Lahore-Ferozepore (Bridge)
4	Lahore-Wagah (Attari)
5	Lahore-Kasur-Ferozepore (Ganda Singh Wala)
6	Lahore-Kasur
7	Kasur-Pakpattan
8	Kasur-Chunian-Dipalpur-Okara Station
9	Kasur-Pattoki (Ferozepore-Montgomery Road)
10	Pattoki-Sahiwal (Montgomery)
11	Kasur-Harappa (Montgomery)
12	Okara-Depalpur (Montgomery)
13	Montgomery-Okara-Kamoke
14	Montgomery-Sahiwal-Kaliana
15	Montgomery-Dipalpur
16	Ferozepore-Fazilka
17	Fazilka-Abohar-Bhatinda
18	Delhi-Multan
19	Ambala-Simla (Kalka)
20	Jullundur-Hoshiarpur
21	Phillaur-Nawanshahr
22	Jullundur-Kapurthala
23	Jullundur-Phillaur
24	Ludhiana-Jullundur
25	Ludhiana-Sahnewal
26	Montgomery-Arifwala-Khanewal
27	Montgomery-Pakpattan
28	Lyallpur-Montgomery
29	Shorkot Road (Jhang-Lyallpur Road)
30	Lyallpur-Toba
31	Jullundur-Phillaur
32	Amritsar-Sultanwind
33	Amritsar-Patti
34	Patti-Kasur
35	Ferozepore-Zira
36	Zira-Ferozepore-Jullundur Road
37	Ferozepore-Moga
38	Moga-Barnala

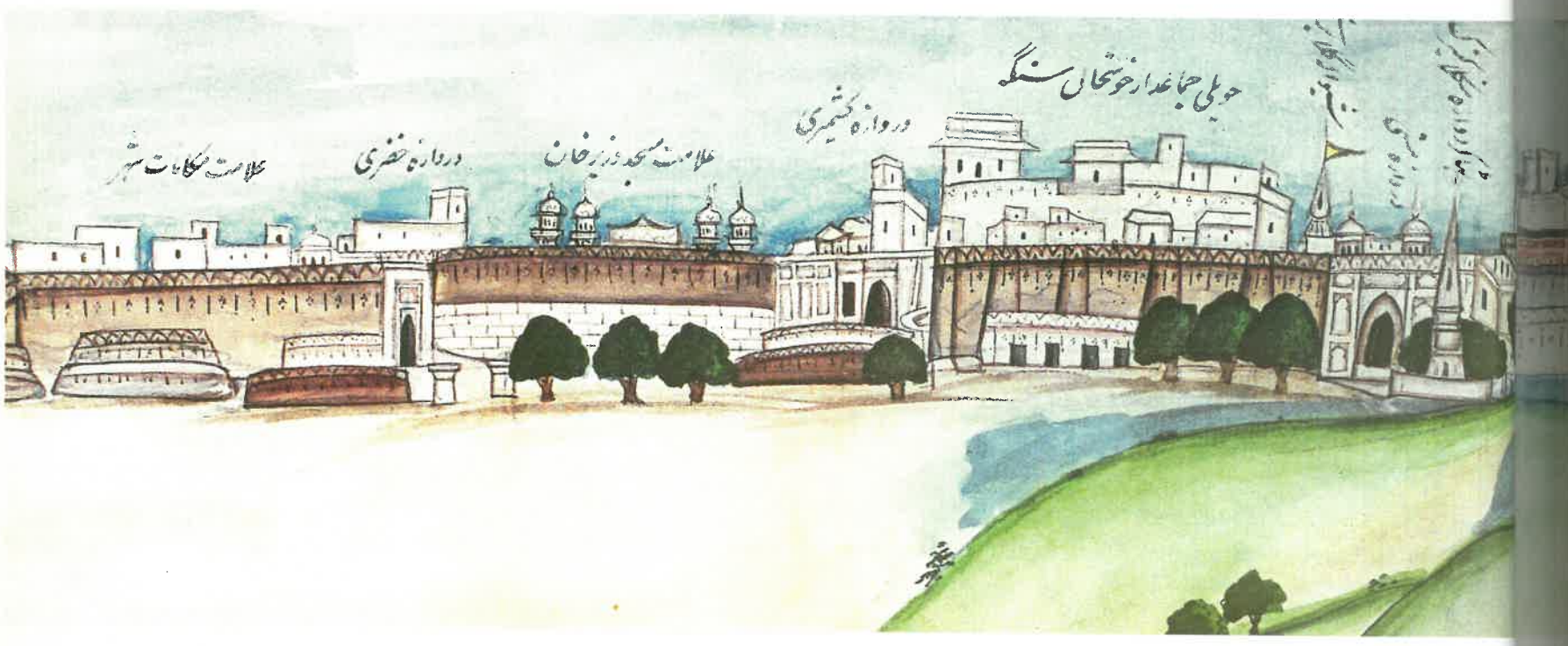
Early British Period View of Lahore Fort and Walled City

Gulgasht-i-Punjab, the general history of the Punjab from 1469 to 1849, was written in Persian by Raja Ram Tota. The manuscript, lying in Maharaja Ranjit Singh Museum, Amritsar, was illustrated sometime between 1849 and 1860 with paintings showing monuments in Amritsar, Lahore and other cities of the Sikh kingdom (Lafont 2007: 68-69). The manuscript was illustrated with paintings of historical figures (including young Maharaja Ranjit Singh and Maharaja Sher Singh) and with the views of important buildings. The details of some of the historical illustrations were inspired from Imam Bukhsh Lahori workshop. The miniatures were richly decorated with gold and other vivid colors, their captions and historical explanations are often misleading, but still show the involvement of an enlightened patron of the architectural heritage of Punjab and its capital Lahore.

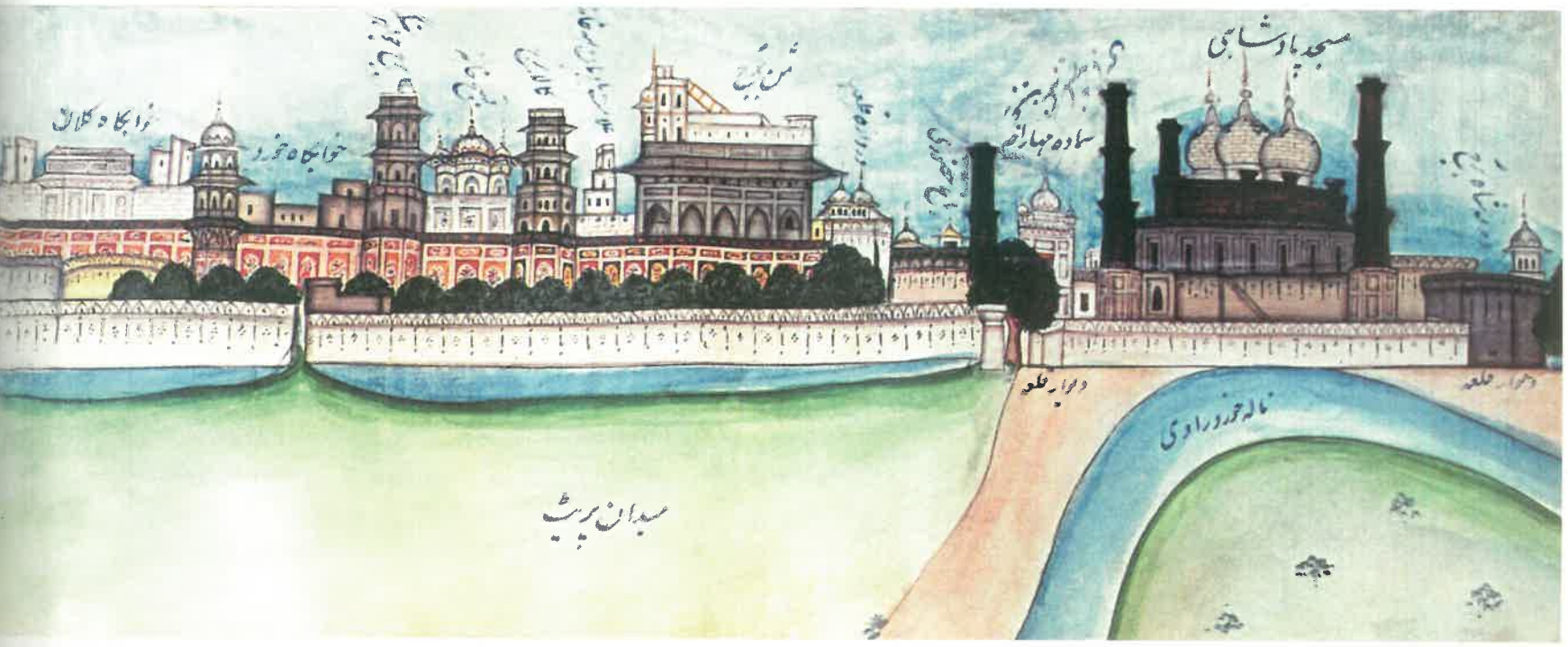
The image shows the panoramic view of buildings starting from Badshahi Mosque on the western side to Shah Burj on the eastern side of Khizri Gate. The primary focus of the image is on capturing the visual image of important buildings such as Masjid Wazir Khan, Haveli Jamadar Khushal Singh, Lahore Fort and Badshahi Masjid. Haveli Jamadar Khushal Singh was the largest *haveli* in the Walled City. It was subsequently occupied by Raja Dhyan Singh and is now used as Nawaz Sharif Girls College. Although the details are missing, the silhouette of important buildings is very well drawn and presented to the audience of the manuscript. The picture wall of Lahore Fort has been beautifully painted. The view shows the outline of residential buildings, but their architectural features are missing. Nullah Khurd Ravi or Chota Ravi and Parade Ground are shown in the foreground.

Dewan-e-Khas quardrangle

Early British view of Lahore Fort and Walled City



Smadhi Ranjit Singh



First Quarter of Eighteenth Century Wooden Model of Lahore c.1825

This model was prepared during the late Sikh period and shows the Walled City and Lahore Fort. An open space separates the Walled City from Lahore Fort. It provides a rough sense of building density and scale. The model clearly shows the fortification wall, towers and roads emerging from the gates. A branch of the River Ravi passes close to the Badshahi Mosque. The model clearly shows the important buildings which include Wazir Khan Mosque near Delhi Gate, Sonehri Masjid in Kashmiri Bazaar, Begum Shahi Masjid, Haveli Khushal Singh near Masti Gate and Haveli Dhyan Singh inside Taxali Gate just south of Lahore Fort.

Eighteenth Centery
Wooden Model of Lahore

The model shows high density development within the wall, containing mostly small and

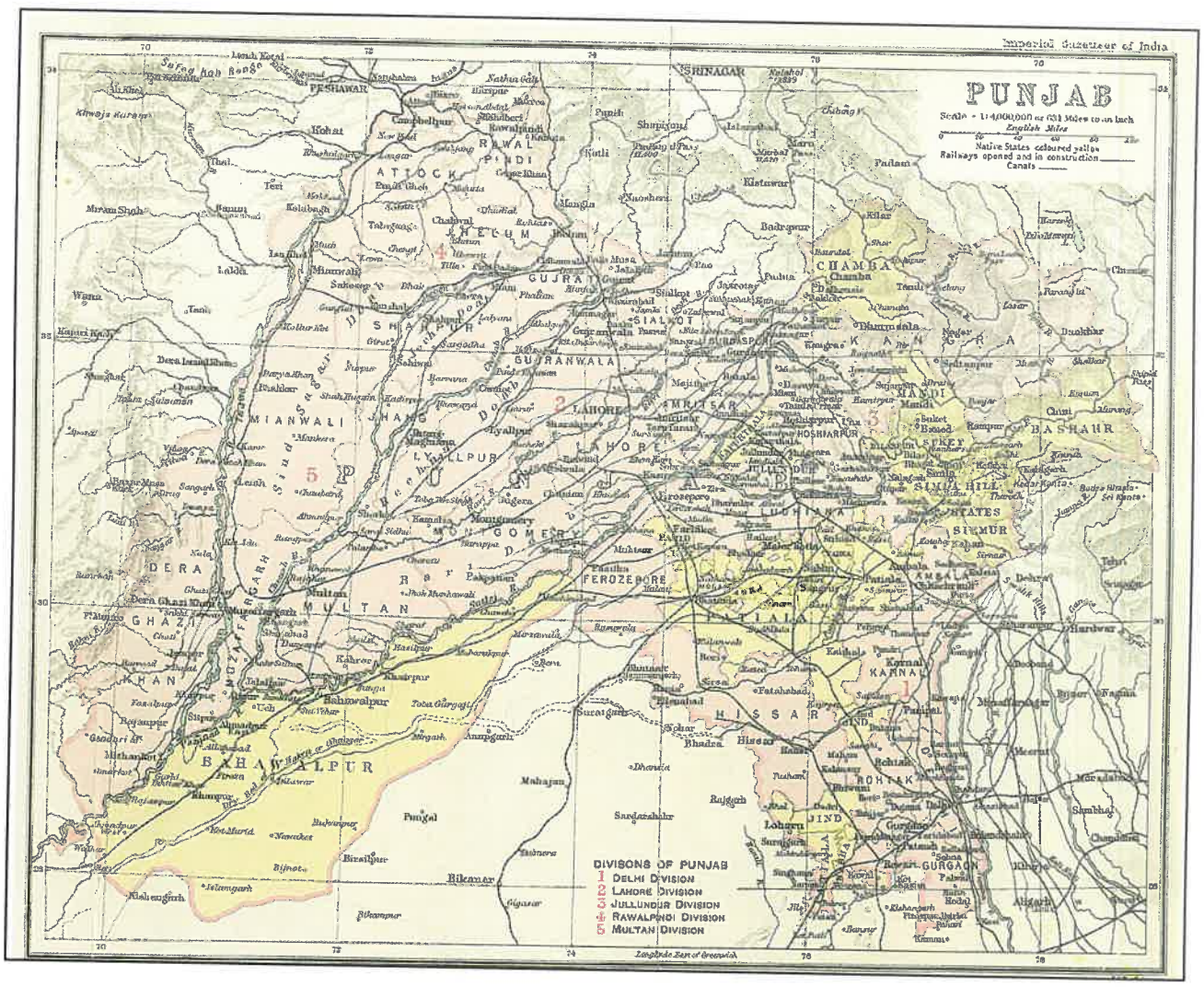
medium size courtyard houses. The fortification wall is pierced with 13 gates beginning clockwise from Roshnai Gate, Masti or Masjidi Gate, Sheranwala Gate, Kashmiri Gate, Khizri Gate, Delhi Gate, Akbari Gate, Mochi Gate, Shahalmi Gate, Lohari Gate, Bhati Gate and Taxali Gate. Mori Gate located between Lohari and Bhati Gate was used as a conduit for the disposal of refuse from the Walled City.

Punjab

During colonial rule, Lahore remained the capital of united (east and west) Punjab. This map shows the geographical limit of Punjab stretching from Attock (Attock District) to Islamgarh (Bahawalpur State) in the west and Shipiel Pass in (Bashahr District) to Kamon in Gorgaon district in the east. Administratively, Punjab was divided into Delhi, Lahore, Jalandhar, Rawalpindi and Multan Divisions. Bahawalpur, Patiala, Kapurthala, Jind, and Bashahr states were also part of Punjab.

The important rivers of Punjab were the Indus, the Jhelum, the Chenab, the Ravi, the Beas and the Sutlej. The River Jamna defined the eastern limits. A number of perennial streams originating from north moved southward after traversing several districts. Dalhousie, Simla and Murree used to be important hill stations. In general, the plains of Punjab used to be the most fertile land in the Indian subcontinent. The Grand Trunk Road laid out by Sher Shah Suri connected Delhi in the east with Attock in the west. A number of *sarais*, *baolis*, bridges, mosques and gardens were built along its entire length.

Map of Punjab



Early Maps of Lahore

Plan of City and Enviorns of Lahore 1846 (detail)

The British rulers in the subcontinent conducted various types of surveys of the territories which they had conquered with a view to completing geographical knowledge of areas under their control for revenue and administrative purposes. The three main types of surveys conducted by military engineers were (a) revenue surveys (b) topographical surveys and (c) trigonometric surveys which gave voluminous information about the land and the people of the country. Detailed maps of towns and cities were also drawn for planning and administrative purposes. The maps given in this chapter show that how a city, which they inherited, was understood, managed and planned. The earliest maps also show the surviving landscape features of the Mughal city which British transformed by the introduction of the railways dividing the historic area of Mian Mir and Shahdara. The earliest maps indicate that Lahore used to be one grand city with gardens suburbs all around the town. The railways divided the city into northern and southern parts with more thrust on development in the south neglecting the gardens suburbs along Grand Trunk Road in the north.

Plaque showing the erection of house by Jean Baptiste Ventura

Sketch Map of the Fortified City of Lahore: March 1837

This is the first comprehensive map of the Walled City and its environs showing the positions of camp headquarters during the visit by His Excellency General Sir Henry Fane, commander in chief of all the forces in India, to His Highness Maharaja Ranjit Singh, chief of the Sikh nation and Lord of Kashmir. The British commander-in-chief was invited to the Punjab for the wedding of Maharaja's grandson. The map, an important source for understanding the Sikh period trade routes and military establishments, was drawn by Capt. W. Garden.

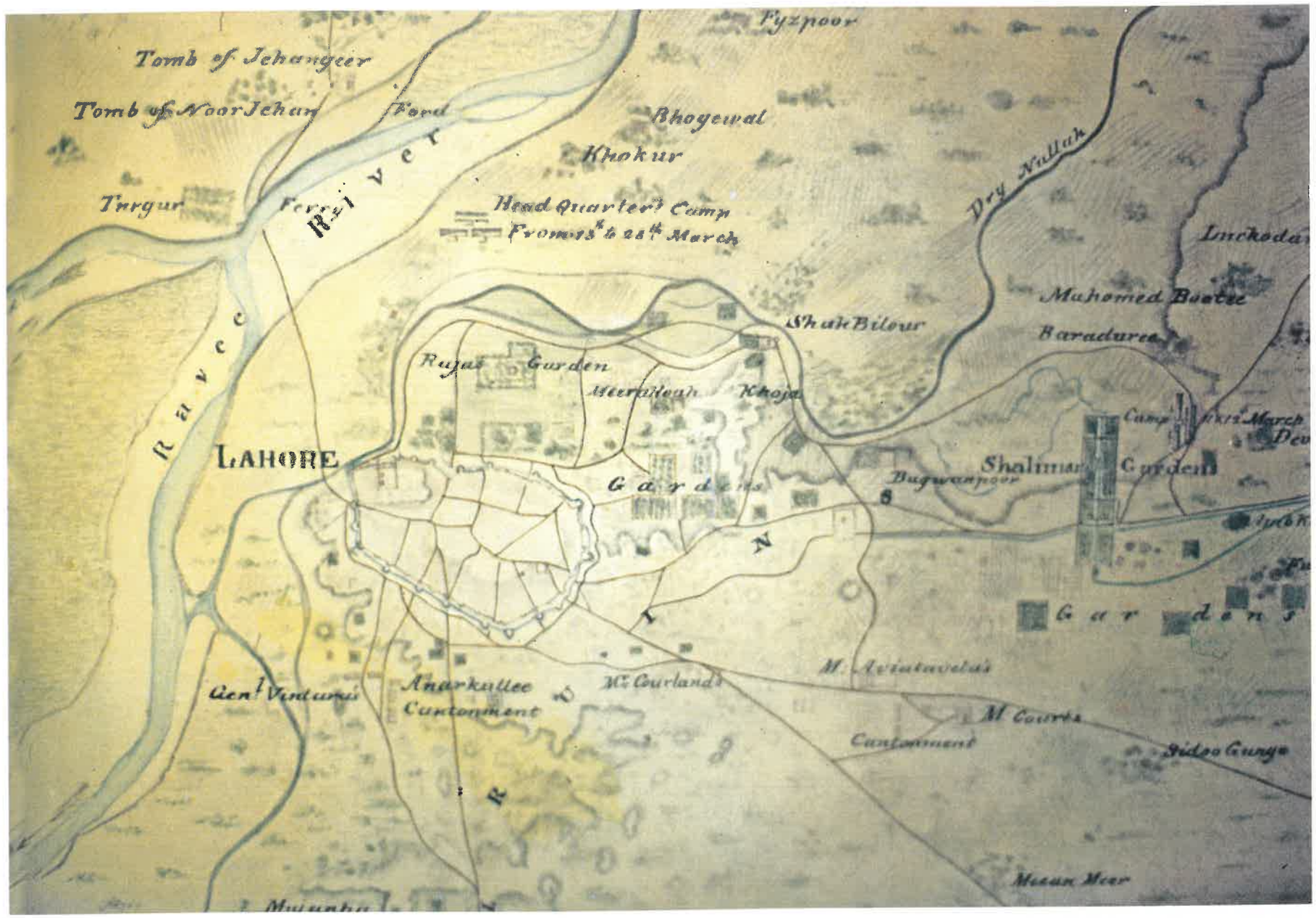
Ranjit Singh, after assuming power, felt the need to administer his growing possessions on the model of General Perron's in Ganga Jamna *doab* and create regular military troops. The first infantry units that he created were headed by a *Kumedan*, inspired by the commandant of the French brigades. The first Punjabi or *khalsa* army was composed of officers and soldiers of the French brigades who had survived the British conquest of 1803 and of soldiers who had deserted the native regiments of the East India Company (Lafont 2007:67).

The two important *frangis* (Europeans) who joined Ranjit Singh in March 1822 were Jean-Francois Allard, a former French officer of the Old Imperial Guard, and Jean-Baptiste Ventura, a young Jewish Italian who spent only some months in the "Dragoons of the Queen", a regiment from the Piemont (Olrich, 1985:I.167). Ranjit Singh gave them Lahore Fort and the Gardens of Anarkali as their headquarters. Ventura used Anarkali's tomb as his residence. They started raising *Fauj-i-Khas* or special (royal) army in 1822. Allard was the supreme commander of this elite army and all its regiments and was only answerable to the Maharaja (Pearse, 1898: 311). In 1826, two other officers - Claude Auguste Court (French) and Paolo Avitabile (Italian from Naples) - came from Persia and joined the army. Court was trained in Ecole Speciale Militaire de Saint-Cyr and completely renovated the artillery of the Punjab. Soon a modern cantonment for the *Fauj-a-Khas* was built around a *champ de maneuver* near Anarkali on a vast plain delimited by rows of date-palms. A modern bazaar sprung up nearby, extending from the cantonment of Anarkali to the rampart of the Walled City. Allard and Ventura also set up an elegant Soldiers Garden along the arm of Ravi that flowed near Anarkali (the site was located at the present Central Training College and district courts). Nolakha Garden became the headquarters of General Court Brigade and *Budhu ka Awa* (kiln) was turned into headquarters of General Ventura brigade and his residence (Goulding, 1924: 44). Ranjit Singh also gave three villages to General Court on the north-east of the Walled City.

View of Eastern Facade of Residence of Paolo Avitabile

Sketch map of fortified city of Lahore: March 1837" (opposite page)

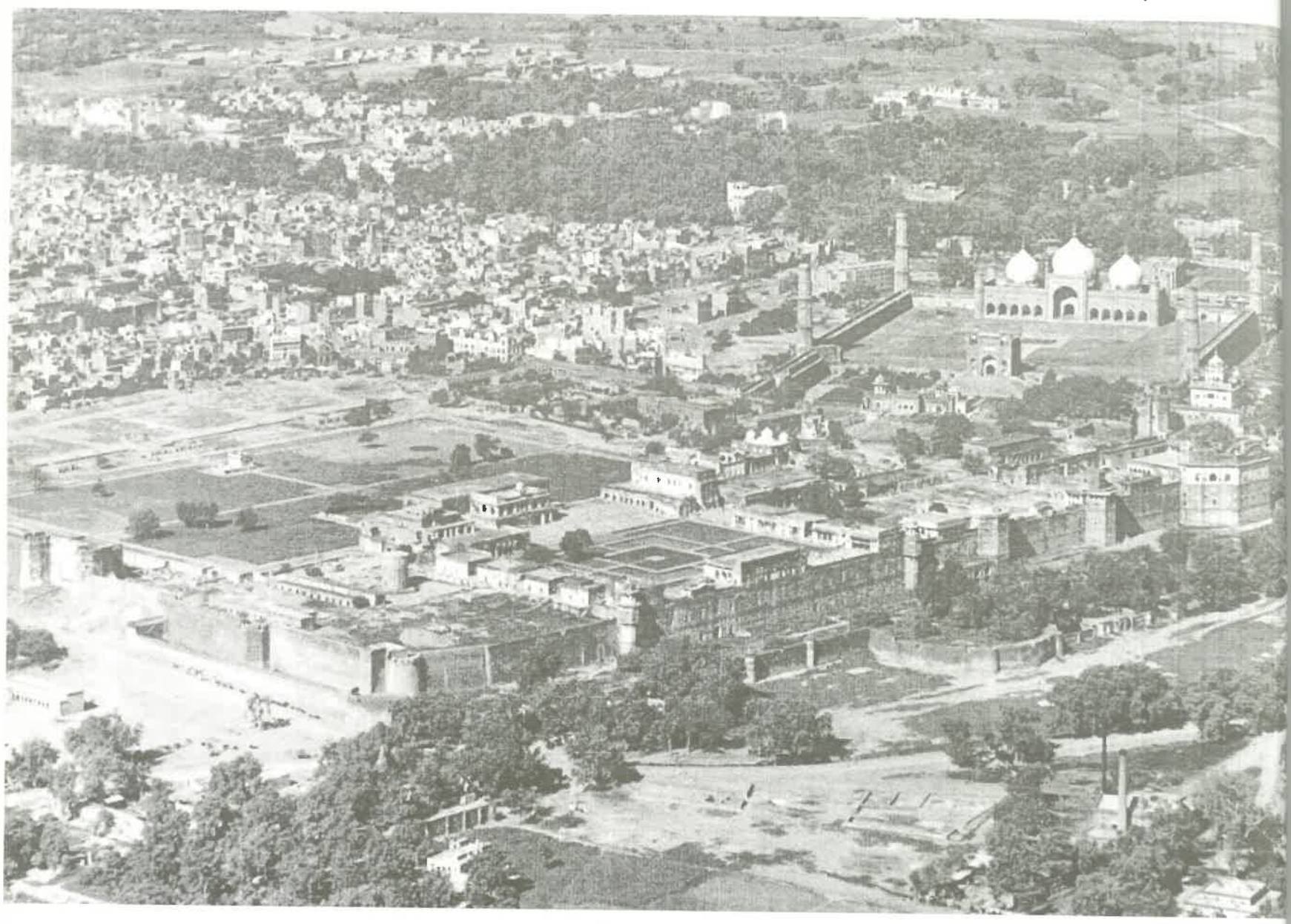
The most prominent of the city's gardens were located along the terrace of the River Ravi including Shalamar Gardens in the northeast, Bagh-e- Mirza Kamran (Kamran Baradari) on the


Fyzpoor
Tomb of Jehangeer
Tomb of Noor Jehan
Ford
Bhogewal
Khokur
Dry Nullah
Tirgur
Ferry
River
Head Quarters Camp
From 13th to 28th March
Luckodar
Mahomed Bootee
Shah Bilour
Baradaree
Rujas Garden
Meerallah
Khoja
Camp 28th March
Shalimar Gardens
LAHORE
Bugwanpoor
Gardens
N
Gardens
M. Aviatavelus
Anarkullee
Cantonment
Mr Gurland's
Gen.l Ventura's
M Courts
Cantonment
Sidoo Gung
Mauu Mar

Fyzpoor
Tomb of Jehangeer
Tomb of Noor Jehan
Ford
Bhogewal
Khokur
Dry Nullah
Tirrgur
Ferry
River
Head Quarters Camp
From 18th to 21st March
Luckodar
Muhomed Bostee
Shah Bilour
Baradurree
Rujat Garden
Meerallah
Khoja
Ravee
LAHORE
Gardens
Camp
Shalimar Gardens
Bagwanpoor
N
Gardens
M. Aviatavelas
Genl Ventura's
Anarkullee
Cantonment
Mr Gurland's
M Courts
Cantonment
Sidoo Gungo
Mauer Meer

Ravi itself, the gardens of the Lahore Fort, and tombs across the river at Shahdara. Additionally smaller gardens, mazars, garden estates lined the river terrace and its shifting bed along the northern and western sides of the city. As one moves south and east of the river however, detail and texture start to diminish below the Walled City into a sparse network of roads amidst scattered villages. In bold capital letters, the single word 'Ruins' inscribes a path parallel to the river just below the city walls.

The limits of Lahore on the northern side are up to Shahdara which contained the tomb of Jahangir and Nur Jahan while another structure mentioned as Targhar (Telegraph house) is located close to the River Ravi. This building is the precise location of Kamran's Baradari. The villages of Lakhodher and Shadipura are also mentioned on the southern side of the River Ravi. To the north of the Walled City, a dry *nullah* is shown .This is probably one of the dry branches of the River Ravi. The shrine of Shah Bilour (Bilawal) is located alongside.



Aerial view of Lahore Fort & Badshahi Mosque (1895)

To the southern side of the Walled City, a road leads to Ferozepur and on it lies the *Anarkali Cantonment* and the nearby General Ventura's residence. The village of Majvaha (Mozang) is the southernmost settlement along this road.

The major expansion of the Walled City is located on the eastern and southeastern sides of the Walled City along three important roads. These roads originate from the eastern gate (most likely from Delhi Gate). There is a circular road around the Walled City. Two roads originating from the southeastern corner join slightly on the eastern side and then bifurcate into two roads. One road passes close to Mian Mir (this is probably modern day Allama Iqbal Road). The other road leads to Taran Taran touching the historic settlement of Gunj.

The most important road on the northeastern side is the one which leads to Amritsar and

Bagh-e-Mirza Kamran
before restoration in 1989

runs parallel to the Canal built by Ali Mardan Khan. It passes along the Shalamar Gardens and a number of other gardens are also shown along this road, including one on the southern side of Shalamar (probably Ali Mardan Khan's tomb garden) and two gardens near Fatehgarh. The canal runs directly up to the Shalamar Gardens. The important settlements shown along this road are Baghbanpura, Manawan. Another road branches off from Shalamar Gardens and leads northwards passing through the villages of Baradari, Mahmood Booti, and Lakhodher. Similarly another road passes through Shadipura and Devipura.

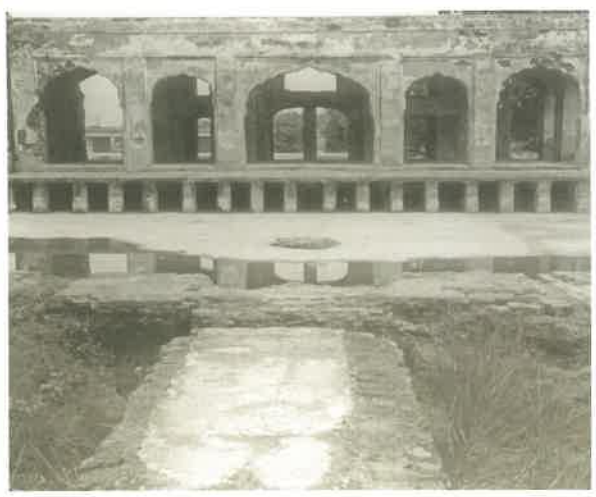
European travelers who visited India during the reign of Ranjit Sing mentioned Lahore Fort and the city, Shahdara monuments, Shalamar Gardens and the ruined suburbs of Lahore. The most important amongst these travelers were Baron Charles Hugel, Jacquemont and William Moorcroft.

The map shows the site of two cantonments, one being Anarkali cantonment and other being on the eastern side located south of Ali Mardan tomb, before the Mian Mir area. The residence of Avitable is shown on the northern side of the cantonment.

Baradari of Bagh-e-Mirza Kamran before restoration side view. (left)

Baradari of Bagh-e-Mirza Kamran before restoration front view. (center)

Bagh-e-Mirza Kamran before restoration view from river Ravi. (right)



Plan of the City and Environs of Lahore, 1846

The decade of 1840s is considered the most significant in the history of Lahore. During this time, the British started annexing the territories of Punjab held by the Sikhs. Several battles were fought at Chillianwala, Gugera and Multan. After the first Anglo-Sikh War, 1845-46, the British Governor-General, Lord Hardinge, entered Lahore, the capital of Sikh rule on 20th February, 1846, and on 11th March imposed upon the young Maharaja Duleep Singh, then only a young boy under the regency of his mother, a peace treaty (NBR, 1949: VI 332). It accused the Lahore government and the Sikh army of having violated the terms of the treaty of 1809 by unprovoked aggression on British provinces. The British annexed the Jalandhar Doab and the hill country between Beas and the Indus rivers to Ghulab Singh. The Sikh army was greatly reduced. All guns were taken over by the British, and they were given permission to pass through the Punjab. The British based in Lahore promised not to interfere in the internal administration in Lahore.

Plan of the city and Environs of Lahore, 1846 (opposite page)

The British government controlled everything in Lahore and the young Raj was only a figure-head. This is the earliest map in which relief is shown by hachures. This map was originally drawn by A. Fraser, Lt. Engrs; surveyed by W. Abercrombie, Capt., F. Whiting, Lieut., Engrs.; signed, A Irvine, Brigr. Chief Engr., Army of the Sutledge and finally signed by J. Cheap, Col., Chief Engineer.

The map shows villages and gardens of the Sikh period. The most important settlements shown on the southern side are Mozang and Ichhra, which also form the southern limit of the town.

In the map, a dry nullah is shown flowing close to Badshahi Mosque after passing close to Ranjit Garden. On the eastern side, the map shows a canal which was drawn by Ali Mardan Khan from the River Ravi during the reign of Shah Jahan and which ends at Shalamar Gardens. The map shows a number of gardens located on the southern side of the Walled City. There are also a number of roads located on the southeastern and southern sides of the city. These roads terminate on the eastern gate of the Walled City. The important roads include the present Grand Trunk Road passing through Begumpura and Shalamar Gardens. A road originating from Delhi Gate branches off into two roads. One road passes through Mian Mir and proceeds further probably towards Badhana and beyond. Another road leads towards Taran Taran. The cantonment is shown in between these two roads. The Mian Mir area acquired focus of attention during the Mughal period. Mian Mir was an important saint of the 16th and 17th century and was revered much by Mughal nobility. Emperor Jahangir invited Mian Mir to Agra in the fourteenth year of his reign (Latif, 1892: 47) and Emperor Shah Jahan paid him a visit in Lahore. He was born in Sistan in 1550 and he died in Lahore in 1635. Dara Shikoh was a disciple of Mian Mir. The tomb of Nadira Begum (d.1632) is located close to the shrine of Mian Mir. Similarly, the tomb of Mullah Shah Badakshi (d.1661) and the tomb of Khawaja Bihari are also located in close vicinity.

A third road originates from Delhi Gate and proceeds straight towards Ferozepur. It is apparent from the map that most of the settlements exist on the eastern side along Grand Trunk Road.

However, Shalamar Gardens is located on the eastern edge and tomb of Mian Mir and an old tank and *sarai* (probably Nadira Begum's tomb) is located on the southeastern edge of the town. The map shows the baradari beyond the River Ravi. Thus, it may be inferred that the Kamran Baradari was an important crossing point and was frequently mentioned in the travelogues of the British period. William Barr and Colonel Wade describe their experience in the following words:

"On this being done, we.....crossed before the nightfall, and an encampment was formed on the right bank of the river, in an extremely pretty spot, shaded with large trees, amongst which the graceful date flourished, and with its feathery leaves added much to the beauty of the scene. Close to this wood, is a "baradari" erected on a piece of ground which juts into the stream, and being two stories high and constructed with some pretensions to taste, looks extremely well from opposite side (Barr, 1844:122)."

General Ventura and General Allard (French officers in the court of Rangit Singh) also built gardens. A number of these gardens were built along Grand Trunk Road, Hareke Road (Allama Iqbal Road) and Ghore Shah Road. The settlements of Baghbanpura and Begumpura were two important settlements located on the eastern side of the city.

PLAN
OF THE
City and Environs
OF
LAHORE
March. 1846

Scale 4 Inches to a Mile

Original Drawn by A. Fraser, Lt. Bengal Corps assisted by { W. Mouatt, Capt. / F. Whiting, Lieut. } Engrs

(Signed) A. Fraser, Brig.r Chief Engr Army of the Sutlodge

Reduced from the Original, Chief Engineers Office, Fort William, April 1846

(Signed) J. Casp. Colonel Chief Engineer.

Lith.d at the Topl. Depôt, War Office

Col. Sir H. JAMES, R.E. F.R.S. &c. Director

ROYAL ENGINEERS INSTITUTE

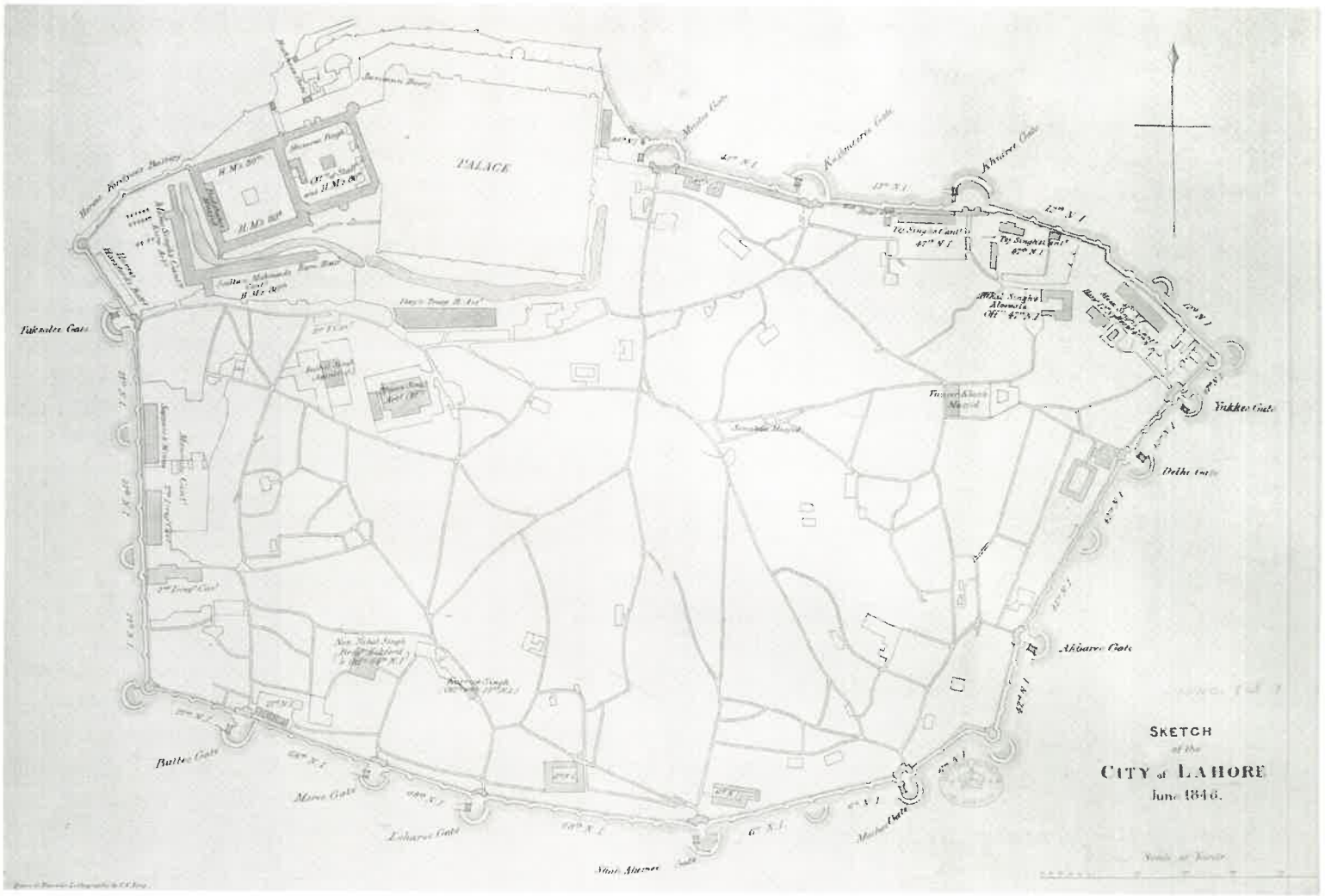
Sketch of the City of Lahore: June 1846

This particular map of the Walled City of Lahore was prepared following the defeat of Sikh Khalsa army during the First Sikh War over the winter of 1845-46. A treaty was signed on March 9, 1846 followed by a supplement signed on March 11, 1846 in which British troops were given authorization to stay until the end of the year. This request was made to reorganize the army and make a strong foothold lest the *Khalsa* forces disrupt everything and pillage the town (Aijazuddin, 2003: 38).

The map shows the deployment of British forces within and outside the walls of the old city. The map indicates that native troops were deployed in some important *havelis* as well to keep an eye on the inhabitants. It is worth noticing that Her Majesty's 80th Regiment, which fought the battle of Mudki, Ferozshah and Sobraon, was quartered within Hazuri Bagh and Badshahi Masjid. The agent of the Governor General was housed in Raja Suchet Singh's *haveli*.

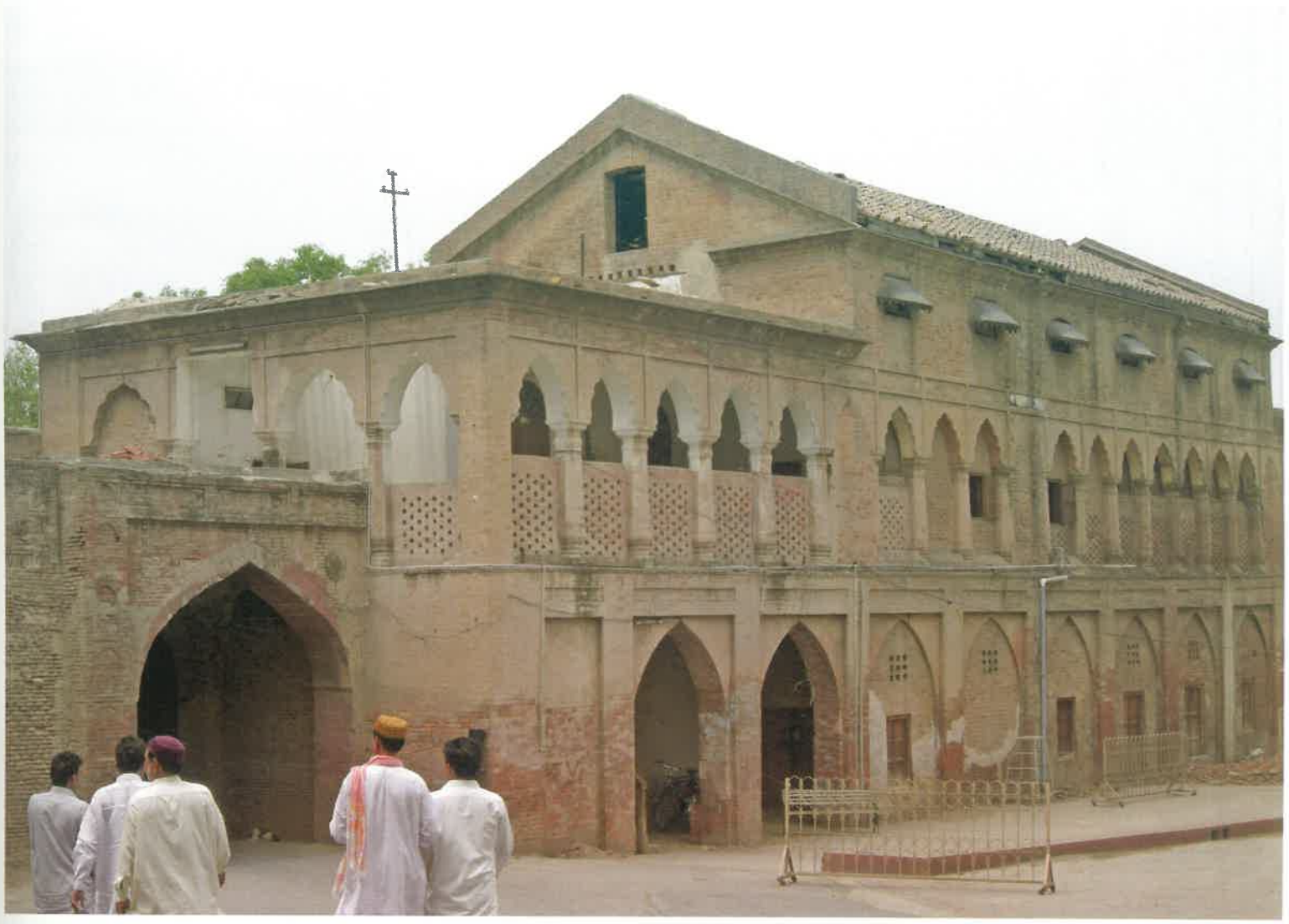
During this time, a number of maps were prepared. This particular map was drawn by T. King and printed at Lithograph establishment of the Quartermaster General's Office, Horse Guard, London.

Hazuri Bagh and Alamgiri Gate of Lahore Fort



Sketch of the city of Lahore: June 1846 (above)

British Period building in Lahore Fort (below)



Plan of the City and Environs of Lahore Showing the Civil Station of Anarkulee and Cantonment of Meean Meer (Mian Mir), August 1867

Plan of the City and Environs of Lahore 1867 (opposite page)

This is the first comprehensive and detailed map of Lahore after the annexation of Punjab and Lahore by the British. The map was prepared after the establishment of Lahore Municipal Committee in 1862.The extent of Lahore is shown as far as Shahdara in the north, the area beyond Fatehgarh and Shalamar Gardens in the east, cantonment in the southeast, the open area beyond Ichhra in the south and the River Ravi in the west. This map shows the roads and extant gardens in the suburbs of Lahore with their names. The gardens are highlighted more than any other topographical features, except roads. The map also shows the Sikh gardens which emulated Mughal tradition as well as suited their own requirements and tradition. The new road infrastructure, new alignment of the canal and railway line laid out by the British government was shown for the first time in this map. It may be seen that the extent of the British city, except Model Town which was built later, remained the same till the end of colonial rule. During a hundred years of British rule, there were constant additions to buildings in the city. Most of the new development was around Mughal and Sikh period's architectural and landscape contributions. A new building typology of churches is also seen to have emerged in every direction.

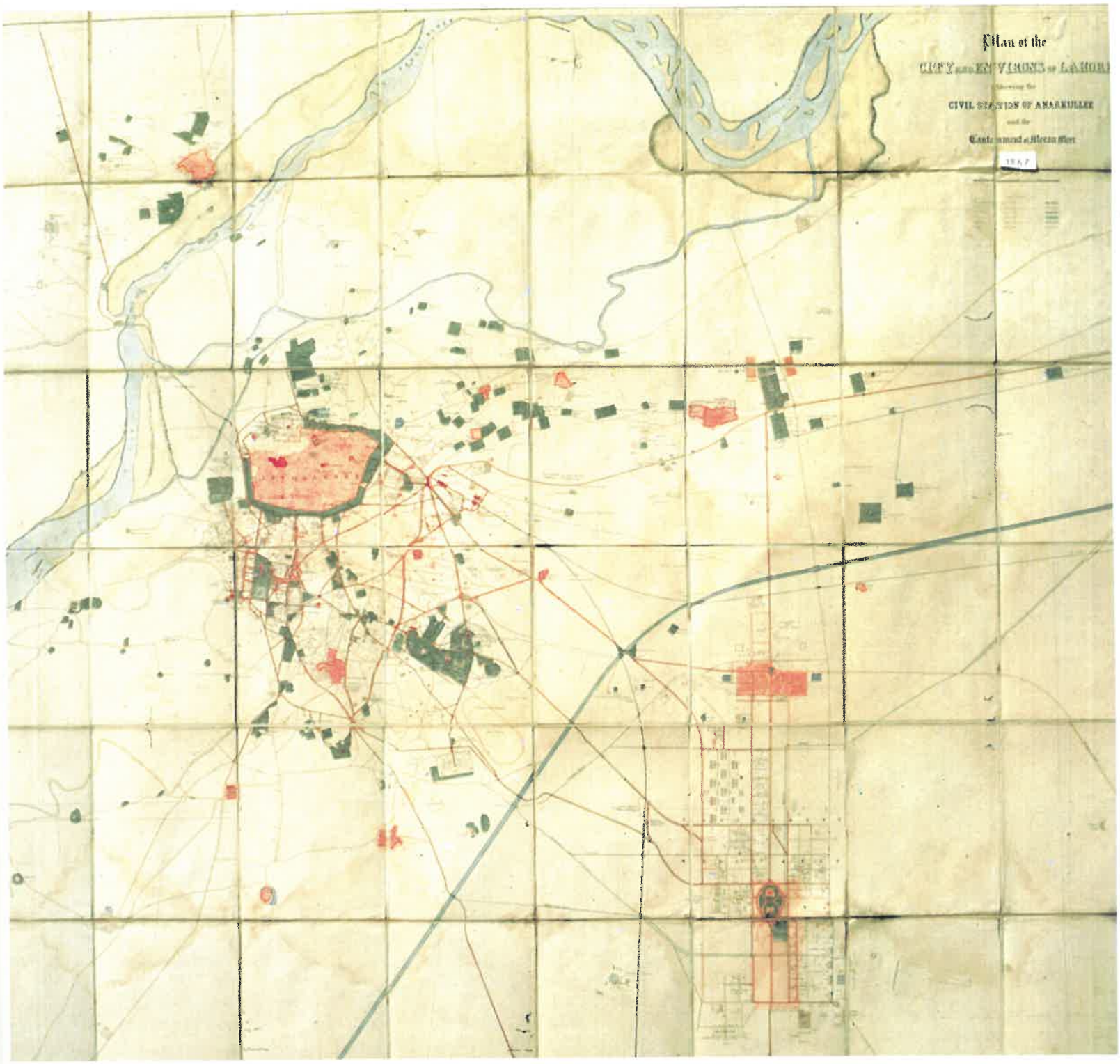
The Shahdara area is shown to consist largely of the contributions of Shah Jahan, as was the case in reality. It contained Jahangir tomb, Asif Khan Tomb and Murad Bakhsh garden. However, the map ignores the tomb of Nur Jahan. A number of Sikh period gardens are also shown around Mughal gardens such as Jawahar Singh Garden adjacent to Jahangir's tomb. Kamran's Baradari was the location of ferry over the River Ravi. The garden of Mirza Kamran was washed away with river floods. Similarly, frequent floods caused devastation in the southeastern corner of Jahangir's tomb. The map shows newly-laid Lahore-Peshawar roads (Grand Trunk Road) along with old Grand Trunk Road. The railway line was not extended beyond the River Ravi and the area preserves its original natural character due to the existence of abundance of wells and kilns in the area.

Until this time the fortification walls around the Walled City were intact, but the moat was transformed into a circular garden. The area on the southern side of the Walled City had numerous monuments around which the British concentrated their architectural contributions. The areas around Sarai Ratan Chand and Tank, Chhaju Bhagat ka Chobara, tombs of Saddar Diwan, Abdul Razzaq and Shah Chiragh were quite spacious. The site for Medical College was reserved between Chhaju Bhagat ka Chobara and Anarkali Sarai. The site for Station Church was reserved on The Mall where a cathedral was built later on.

The junction of The Mall and Lower Mall near the present day Gol Bagh was not straight but turned towards south. The area where Government Garden, Cricket Ground, Chauburji and Wazir Khan's Baradari are located was a large open space until this time. Similarly the Anarkali area north of the present day Nabha Road had Kanak Mandi. Most of the new buildings around The Mall were either small or had large open spaces around them. Almost all the major colonial buildings around Anarkali did not exist until this time. Further east, The Mall had numerous gardens. One of the earliest contributions by the British on the southern side of The Mall was the construction of New Agri-Horticultural Society's Garden and Racecourse. Within the garden, Lawrence and Montgomery Hall were already in place. Jwalla Sahoo Garden is apparent on the northern side while a Mughal period tomb subsequently known as Jamadar Khooshal Singh Kothi was transformed into Government House. East of Agri-Horticulture Garden was Major Hutchinson and Mr. Purdons' Houses.

The area east of Delhi Gate was mostly open with a few Mughal period settlements, tombs and mosques. These included Mohalla Dara Shikoh, tomb of Shah Abul Moali, tombs of Musa Ahangar Muhammad Saleh Kamboh and Dai Anga. With the construction of the railway station, the landscape of the area transformed drastically. Besides the railway station, station godowns and barracks, a mission school, a mission chapel, a mission graveyard, and a mission compound soon occupied most of the area.

The road, north of railway station, leading to Shalamar Gardens was full of gardens. The majority of these gardens belonged to Sikh nobility and mainly concentrated either around the Khoi Miran area or Shalamar Gardens. They dominated the land-use plan of the city and were


Plan of the
CIVIL STATION OF ANARKULLEE
1847

helpful in improving the overall urban environmental quality.

In 1851-52, Bari Doab Canal was excavated which formed the central spine of the new city. Entering the Lahore district near Wagah in the northeast, the canal was cut along the natural ridge southeast of the Walled City, in the area once described as a ruined wasteland. A number of Rajbahs or distributaries were later diverted from it "to spread fertility towards and about the city of Lahore" (Rehman, 2009:47).

Around 1863-64, in terms of architecture, the British undertook work in three areas. The first was Lahore Fort where artillery barracks were built. The roof of Diwan-i- Aam was repaired and converted into a dining hall for soldiers. Shish Mahal and other buildings in the Lahore Fort and Shalamar Gardens were also repaired. The second area of focus was the construction of John Lawrence Hall for public meetings and other gatherings. Upon its completion, work on the cantonment was undertaken with full force (Annual Progress Report, 1863-64:11).

The most important sub-urban development shown in this map is the appearance of cantonment on the southeastern side of the city. Sir Charles Napier decided to move Anarkali cantonment away from the city on sanitary grounds. Therefore, the present site was selected and laid out by military engineers. A marble slab with the inscription, "This was erected to mark the spot where Lord Napier laid out the cantonment of Meean Mir', was placed at the spot to mark the central point of cantonment." It was planned on a grid-iron pattern having straight north-south roads bisected by east-west roads. The major north-south arteries were named after British officers (Wellington Mall, Sir Hugh Rose Street, Elgin Street) whereas the minor east-west streets were named after Indian cities of the Punjab province. They were Amritsar Street, Gujrat Street, Rawalpindi Street and Murree Street. One of the important features of the plan was an oval park located at the center with the Anglican Church at one end and tennis grounds at the other. The Garrison Church of St. Mary of Magdalene was consecrated in 1857 (Aijazuddin, 2003:196). It was described as one of the beautiful churches in northern India. Senior officers lived near the center while subordinates were accommodated outward from the center in order of decreasing rank. Indian and European troops were separately accommodated north and south of the officers' quarters respectively. Each group was housed according to its rank in identical barracks grouped in blocks of parallel lines. For the convenience of the civilians, Saddar Bazaar and Royal Artillery Bazaar were planned in different locations. The architectural form and physical appearance of the church reminded one of the traditional English village landscapes. The British Military Hospital (BMH) was founded in 1854 in the north of the Oval Ground. In 1927, another hospital

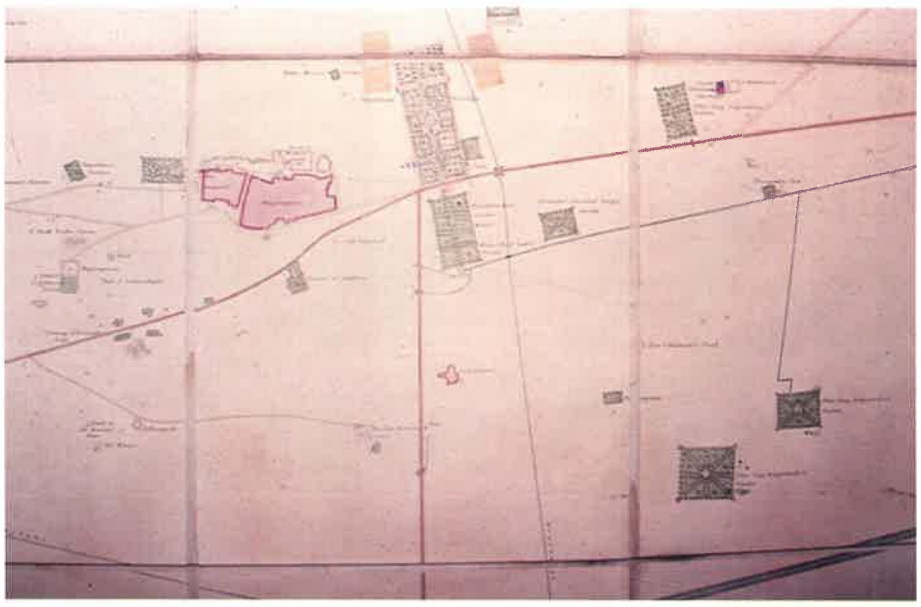
Detail of plan of the City and Environs of Lahore 1867 (below)

known as Indian Military Hospital (IMH) was established near Royal Artillery Bazaar. In 1943, BMH and IMH were amalgamated into one hospital and renamed as Combined Military Hospital. The artillery and cavalry grounds were two major open areas of the proposed scheme. The site was barren and, therefore, a large number of trees were planted and the area irrigated with water drawn from the canal.

The annual progress report of Public Works in Punjab (for the year 1863-64: p.3) gives the details of the progress of the work on the scheme. It mentions that "In the cantonment of Meean Mir, Lahore, several short new roads and one long one, the aggregate length of the whole about 6000 feet, have been completed. A new road ¾ mile in length has been made, to connect the Saddar Bazaar with the main road from Meean Mir Cantonment to the city of Lahore." The additions to quarter- guard in the Royal Artillery Lines and Armourer's Shop in the Infantry Lines were finished during the financial year 1967-1968. During this time, the European infantry area received special attention. Here, the work on Sergeants' mess and a library was commenced. The school was enlarged and work on an orderly court-martial room was also in progress. Moreover, a large number of trees were planted in the lines.

The plan shows Multan-Lahore railway line which was laid out in 1861. The railway station was built in 1859-60 and the Lahore-Gujranwala railway line was laid out in 1881 (Vandal and Vandal, 2006:70). The Multan railway line connected cantonment with Lahore city but it bifurcated the Mian Mir area. Mullah Shah and Khawaja Bihari tomb gardens were separated from Nadira Begum and Mian Mir's tombs. Similarly, Nur Jahan's tomb was separated from the tomb of Asif Khan and Emperor Jahangir. These two decisions changed the architectural character and ambiance of strong spiritual center of Mian Mir and Mughal Imperial Complex of tomb gardens at Shahdara. These decisions had negative implications and consequently they lost their grandeur and identity which they had acquired during the Mughal period.

In 1867, Act No. XV was passed by the Governor General of India in Council which authorized municipal committees to receive municipal funds from property taxes and/or any fines levied. The committees were authorized to utilize these funds for police establishment, and to keep the public streets, roads, drains, tanks and water courses clean and repaired. According to the Municipality Act, it was made mandatory that streets must be laid straight. This byelaw had a strong impact on the physical form of settlements. The residential settlements located on the southern side of Circular Road were planned following this concept. The streets were laid straight while houses were planned following the design tradition of the Walled City. However, both local as well as classical elements were employed in the streetscapes. The houses were three-storied high and stood side by side.



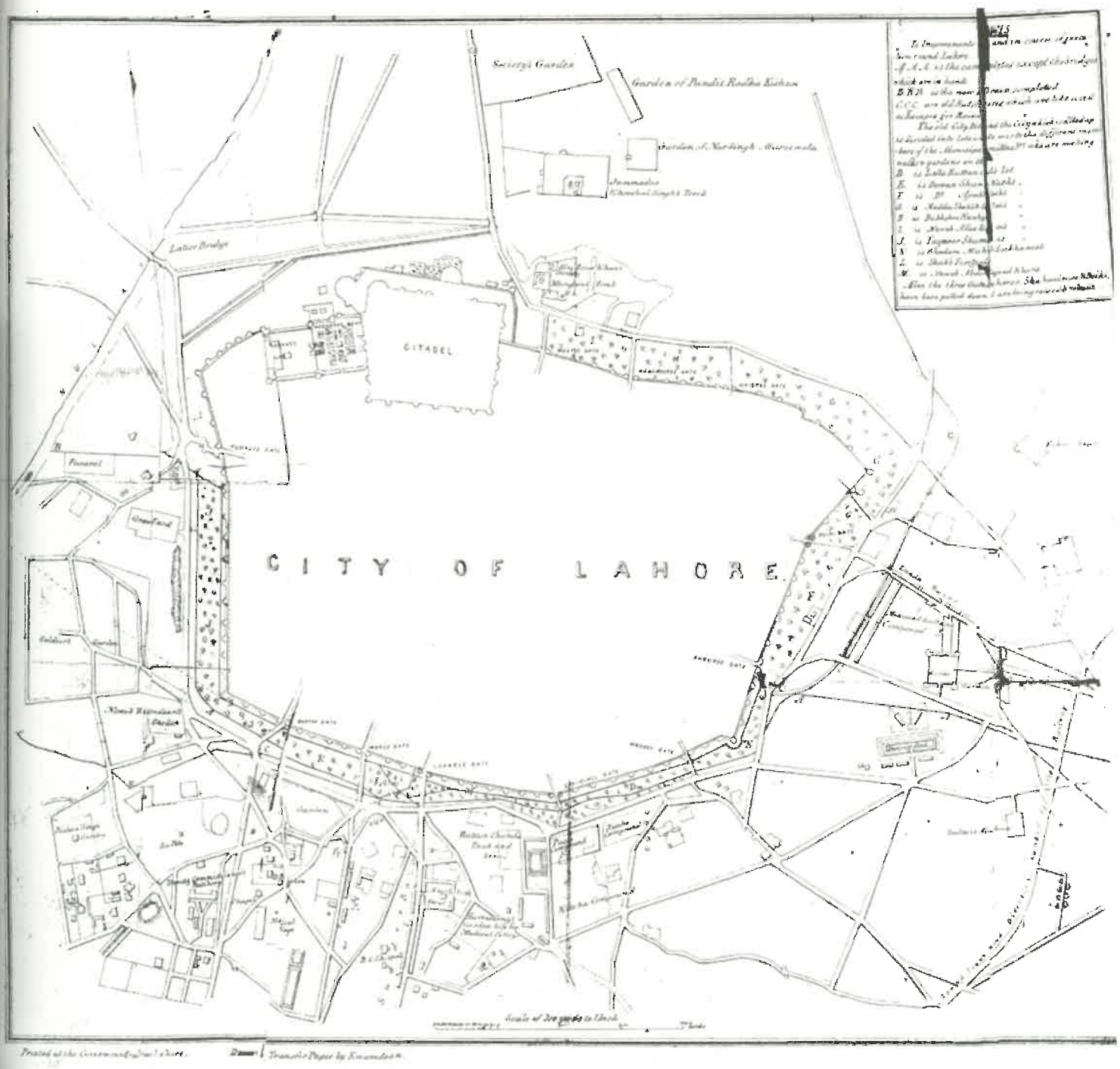
Detail of plan of the City and Enviorns of Lahroe showing Shalamar garden Baghbanpura, Ali Mardan Khan Tomb and neighbouring gardens.

City of Lahore: Circular Garden 1867

Lahore remained the capital of the Mughal Empire for fourteen years during the reign of Akbar between 1584 and 1598. He enclosed the city with a fortification wall of burnt bricks and pierced it with thirteen gates. There used to be 10 bastions between the two gates and a moat outside the city wall. Over time, due to neglect and successive invasions from east and northwest, the defense wall was gradually weakened. Repairs were carried out in 1799 when Ranjit Singh became the ruler of Punjab with his capital at Lahore. Subsequently Hukma Singh, Ranjit Singh's governor, was ordered to restore the wall around the city. A second fortified wall of burnt brick

Circular Garden near Kashmiri Gate (top)

Circular Garden near Texali Gate (bottom)



Plan of Circular Garden
1867

using lime mortar was erected beyond the moat. Double gates were provided at all entry points and bridges spanned the moat. The moat was filled with water taken from the River Ravi.

After the death of Ranjit Singh in 1839, the Sikh kingdom began to fall apart. The fortification wall particularly around Lahore Fort was destroyed at several points. By the time British took over from the Sikhs in 1849, the wall was in dire need of repairs. Between 1859 and 1864, the British demolished the outer wall and reduced the inner wall to half its height. The moat was filled with earth and converted into a garden. The garden was divided into several sections and each section was placed in charge of an important noble. The map gives information about the development project which was being done in this circular garden. It provides information about the areas where work had been completed except bridges where work was still in progress. It also shows the areas where the drain was complete. Finally, it gives the names of persons whom the plots of circular gardens were allocated to for maintenance. Marchioness of Dufferin & Ava visited Lahore April 15-21, 1885 and described the gardens of Lahore, particularly Circular Garden, in the following words: "I must tell you that roses at Lahore are things to rave about. I never saw such profusion; one drives through hedges of them; and there are great bushes, and arches and trees covered with them; it seems to me to be a real city of gardens. There are several public ones through which one drives in a perpetual state of exclamation and admiration; and then there is a garden five miles long surrounding the walls of the city, so that whenever a Lahore cockney chooses to step out from his close dwelling and narrow street, he find himself amongst plantains, and roses, and palms, and mangoes, and *pepul* trees, and lovely flowering pomegranates."

Sketch Map of Lahore by the Order of Municipal Committee,

This map covers only the built-up areas of Lahore excluding its garden suburbs. The area covered in the map stretches from Lahore Fort in the north, Jail in the south, Taxali Gate and Civil Lines in the west and Garhi Shahu in the east. The name of important roads is mentioned for the first time. The extensive legends of the map too, describe for the first time important buildings along various roads, clubs, churches, gardens, and banks. In fact, the map serves as a real guide to Lahore. In terms of churches, St. Jones Church (within Anarkali's tomb) and St. Andrew's Church on Empress Road are important. In terms of clubs, Lawrence and Montgomery are the most prominent. The present Nasir Bagh is shown as Anarkali Garden. The important roads are The Mall, Mclagon Road, Railway Road, and Lake Road.etc. Mozang is shown as the largest settlement outside of the Walled City. The present Government College is mentioned as a college on the map.

Lockwood Kipling arrived in Lahore in 1875 to establish Mayo College of Arts and remained here till 1893 (Mathias, N and Todorov, N. 2005: 238). During his term of office, he served as Mayo School of Arts principal and Lahore Museum curator. He along with Bhai Ram Singh, a carpenter, sculptor and teacher at Mayo School of Arts, changed the landscape of Lahore by designing a large number of buildings.

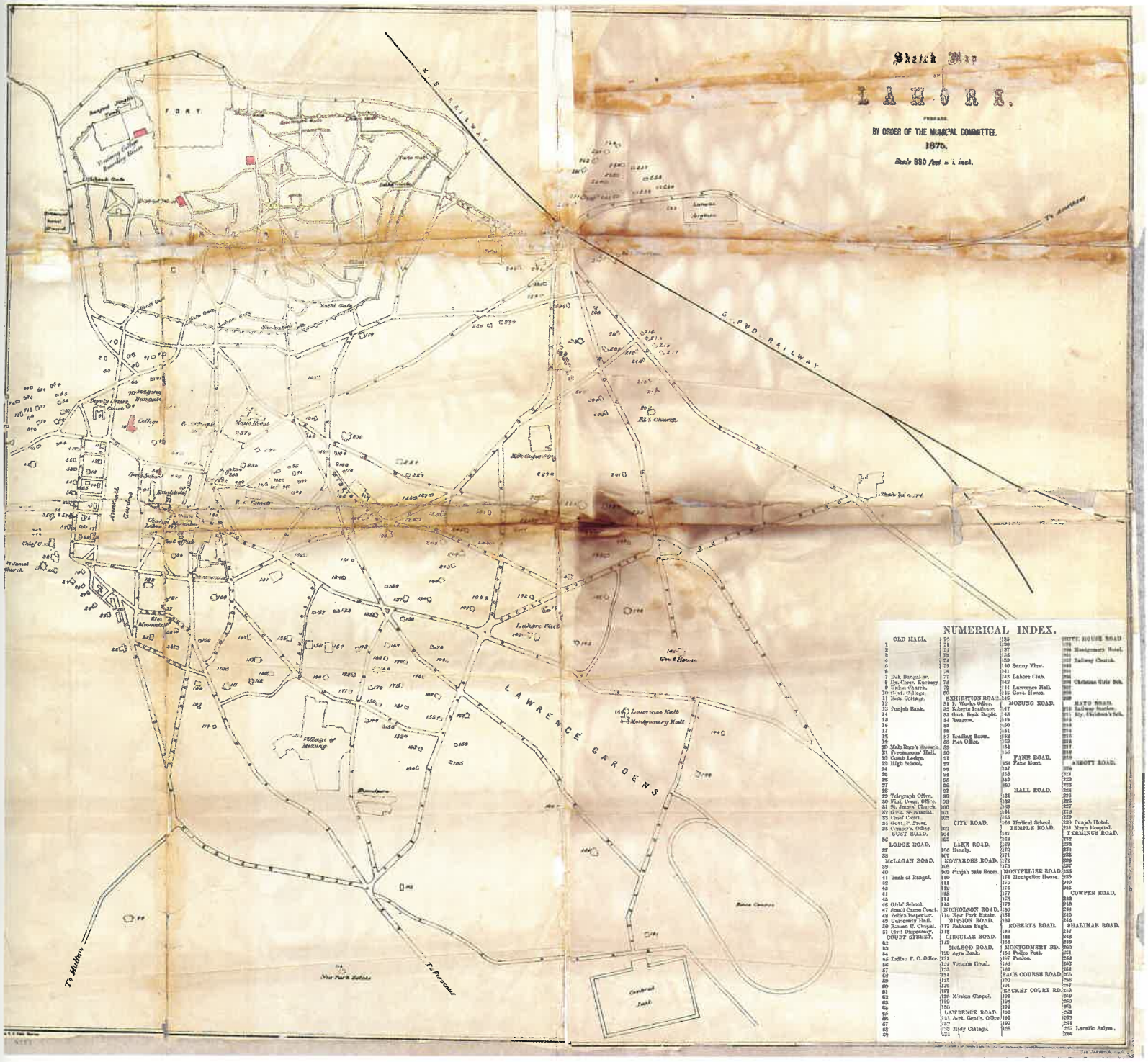
There was utter confusion among the architects as to what should be appropriate architecture of Lahore. There were two main schools of thought; the aesthetic imperialists and the revivalists of indigenous architecture. The former argued that the British should seek to emulate the Romans and impose British architecture with confidence. They were opposed by the revivalists who thought that uninterrupted living tradition existing in architecture, connecting the present and the past should, continue. The true policy should be to discard all imported forms and ideas, and to foster living traditions by sustaining the local master builders, whose craft, skills and expertise were in danger of dying out from lack of patronage (Davies, Philip, 1988:192).

Internal Courtyard of Mayo School of Arts

Besides the prominent examples of colonial buildings being built during that time in Indian cities, there were some quarters in the British intelligentsia and professionals who appreciated the grand tradition of Indian art and architecture and Kipling was one of them. He expressed his opinion in the following words:

"The upper and moneyed classes have no more intelligence and appreciation of art in India than they have in the other countries; the educated classes i.e., those who have been taught English-dislike indigenous forms, and trading and money lending classes alone now seem to be

the support of the *mistry* or native builders and architects. In Gujrat, Kattiawar, Rajputana, Northern India, and the Punjab this individual is the sole repository and trustee of the principles and traditions which form the roots of the Indian art (Kipling 1984: 1)."



Sketch Map of Lahore
1876

Sketch Map of the City and Environs of Lahore Darbar of 1880

In 1880, the then Viceroy visited Lahore and held his *darbar*. This map was produced on the occasion and shows different arrangements made in various locations. The viceroy's camp was set up on The Mall at the site of the present Aitchison College whereas his bodyguards camped on the opposite side where the G.O.R was developed later. The map also shows the location of Lieutenant Governor's camp on the site of the Government House and the Civil Officers' Camp on the site of present day University Ground between Multan Road and Lake Road.

It was in November, 1880, that H. P. Blavatsky and Col. Henry S. Olcott came to Lahore to organize a local branch of The Theosophical Society and discuss various metaphysical subjects with several distinguished scholars. The Viceregal Durbar was held by the Marquis of Ripon fell on November 15th, and was described by H.P.B. Blavatsky in her inimitable style, for the benefit of the Russian reading public, in the pages of the Russkiy Vestnik (Russian Messenger). The original Russian text was published in Volumes 153-54 of this periodical, in the issues for May, June and July, 1881. The description of Durbar was narrated by Blavatsky in the following words:

"In Lahore, a great number of English people from all parts of India had gathered for the solemn reception of the new Viceroy. A vast and desolate area, a veritable oasis, was allotted to the potentates who came to pay homage to the new representative of sovereign power. There all the greater as well as the lesser rajas and nawabs were encamped, with their viziers, divans, hordes of body- guards, court officials, astrologers, magicians, horses, elephants and a whole swarm of parasites. In some instances, the native body-guards were temporarily sent away and their places taken by a European guard of honor.

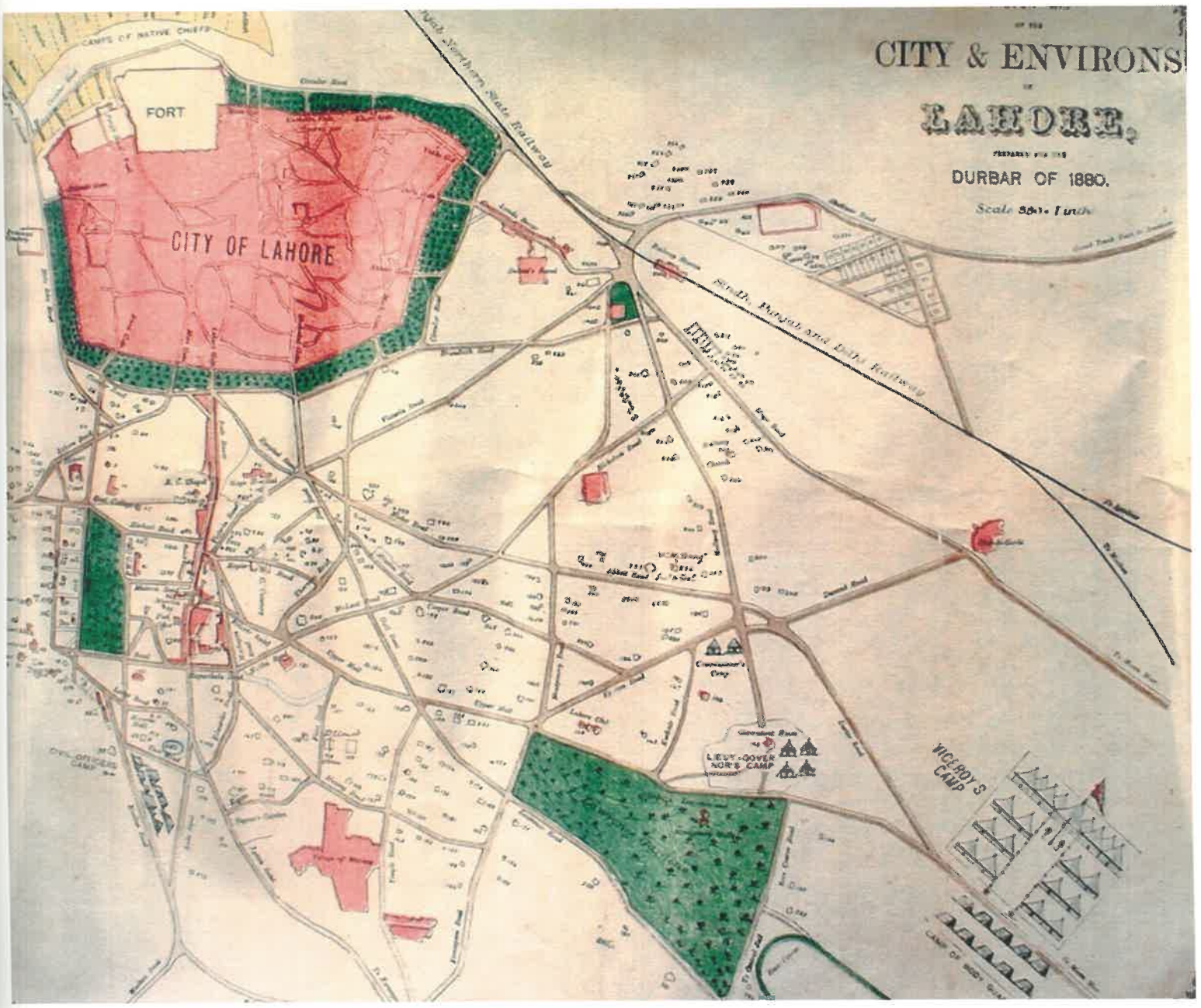
The camps were laid out with mathematical precision. Each was separated from its neighbor by a high partition of ornately embroidered canvas or costly rugs, and each had its own streets, a special entrance and a gate guarded by sentinels. The royal tent was always deep within the court, directly opposite the main triumphal entrance – a monument of embroidered materials and colorful Chinese lanterns – and facing the facade of each Durbar-tent was a lawn, often with fountains that had been temporarily put up, with rows of lantern-posts, and, *O ye gods of the Brahmanas!* with rows of gas-burners!... On the left were the camps of the rajas of the highest rank, those of Kashmir, Patiala, Bahawalpur, Nabha, Jind, Ahluwalia, Mandi, Malir-Kotla, and other Maharajas. On the right were the enclosed camps of the secondary rajas, those of Kalsia, Dujana, Faridkot, and others. All these are rulers whose territories are within Panjab and Kashmir. Neither the Rajput princes nor the rajas from Southern or Central India attended the durbar of the Northern provinces. A few Afghan leaders and Moslem princes were politely refused permission to come to the durbar, to be presented to the Viceroy.... The chief rajas were privileged to hold their own durbars in their camps, apart from the main *vice-regal* durbar.

Behind the camps were endless rows of stables under the open sky. The ceremony of presentation takes place in the durbar tent. In the centre of the stage, the Viceroy sits waiting in immobility on the throne, dressed in a blue uniform embroidered with gold and with a three-cornered hat on his left knee....

Hark, a whistle!.... One, a second, a third, then a clanging on the platform and everything was momentarily silenced. The British authorities straighten up; the rajas and nawabs were transformed into pillars of salt! Hissing and whistling, the train approaches steadily, slows down and finally stops. The Governor-General of Lahore and the Commander-in-Chief of the armed forces, General F. P. Haines, stood at attention before the viceregal carriage and was the first to greet the Marquis of Ripon as he steps out. The honorable Lord had hardly shaken half a dozen hands when the president of the Lahore municipal committee came forward to deliver an address. This was printed on white satin in letters of gold and reposed in a beautiful silver casket, the work of Lucknow artists. The honorable Lord had hardly shaken half a dozen hands when the president of the Lahore municipal committee came forward to deliver an address. This was printed on white satin in letters of gold and reposed in a beautiful silver casket, the work of Lucknow artists."

The important roads were Victoria Road (Railway Road), Mayo Road (Allama Iqbal Road), Lahore Road (Urdu Bazaar), and Andrew Road (north of railway station before it joined G.T.Road). The Civil Secretariat, Chief Court and Commissioner's Office are located west of Anarkali gardens.

By this time, the railway facilities had been growing rapidly. Besides the carriage factory, hous-



Sketch Map of the City and Environs of Lahore Darbar of 1880

ing schemes for railway workers were flourishing near the railway station as well as the Mughalpura area. At the same time, European quarters for high officials were also growing particularly around Governor's House and on these grounds a *darbar* was held in this area. An American artist painter, Lord Weeks, described this area in the following words:

"There is no lack of hotels at Lahore, considering the smallness of transient population, and, as usual, they are all situated in the civil station, as the European settlement is called....As the European suburb is usually large, these highways, shaded by tall trees of the tamarisk family, have a rather wearisome, sameness, and this impression of monotony is partly due to the somber hues of foliage.....While the English community of Lahore, as elsewhere in India, has elected to live away from the native city, and while the original nucleus of this settlement was planted, for sanitary and other reasons, far from the city walls, it has gradually filled up the intervening space, so that usual neutral ground, or no man's land, has ceased to exist weeks."

Lahore at this time was still a garden city. Five year later Marchioness of Dufferin & Ava visited Lahore in April 15-21, 1885 and admired the landscape of the city. "My first impression" she described, "of Lahore is one of luxuriant foliage and flowers and cultivation. I do not feel that I have seen any town but we drove through gardens and along roads double avenue of trees, and there were palms and nurseries of roses, and fertile looking fields... (Marcioness of Dufferin & Ava, 1890: 118)."

Plan of City of Lahore, 1893

The decade of eighties is most significant in architectural history of Lahore which brought about a significant change not only in the lives of the people of the Walled City but also those beings in the suburbs.

The most important contribution to the Walled City was construction of water works. Prior to the construction of his project, the inhabitants of the Walled City would draw water from wells. Considering sanitary precautions, it was decided to provide fresh, wholesome water to the residents through a system of water supply from the wells sunk in the bed of the river or in ground and constantly surcharged with water. The masonry reservoir was, therefore, constructed in 1881. It collapsed and became unserviceable soon after it was filled with water. The reservoir was dismantled in 1883 and a new one, consisting of four iron tanks, was constructed in its place in 1883-84. The iron tanks (each capable of holding 2,58,750 gallons of water) were linked together by means of iron pipes, three to each tank, and overflow pipes towards the north, which discharged excessive water into the drainage pipe on the same side. One of the important features of the project was the use of fire hydrants to combat any occurrence of fire. Once these pipes became defective, the provision of new hydrants was overlooked in the new system.

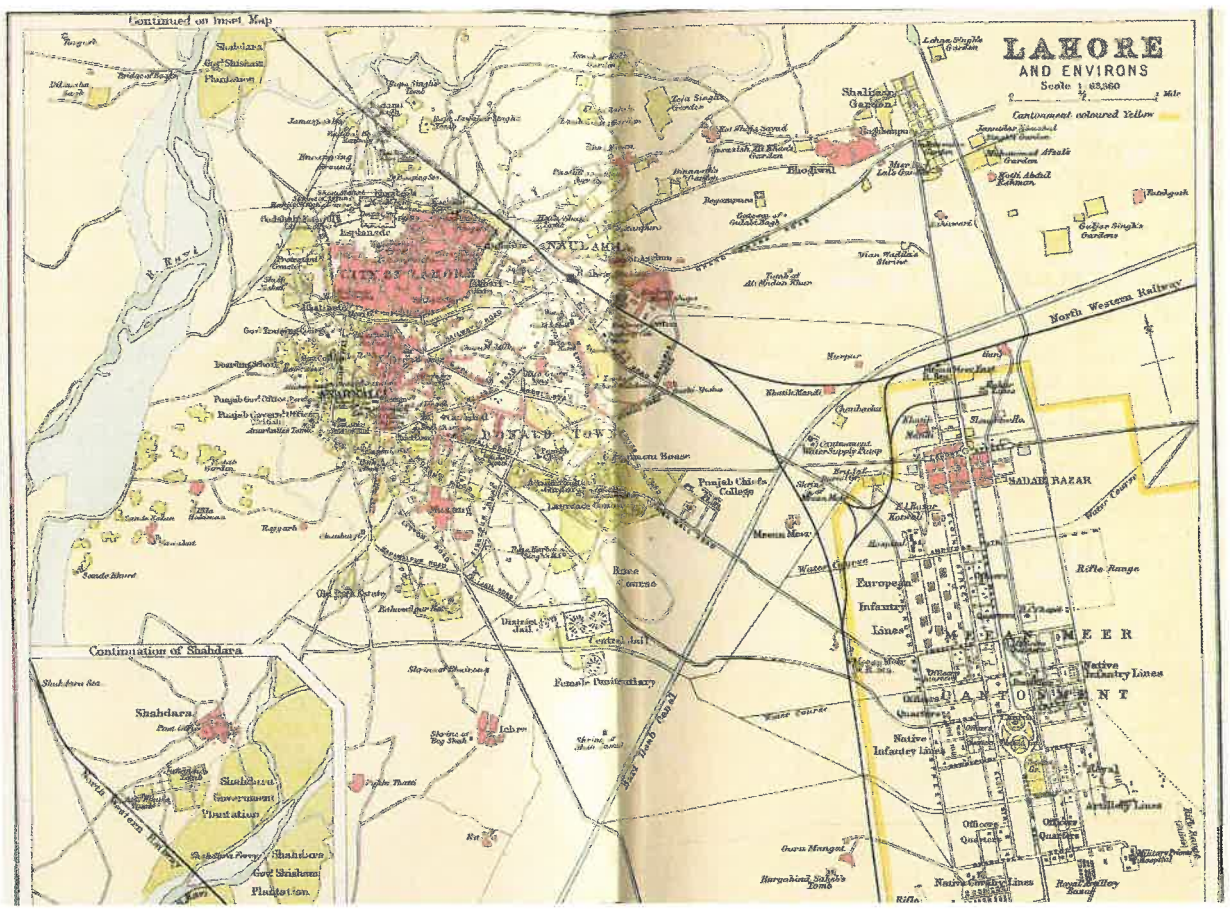
Pani Wala Talab (Lahore Water Work)

In terms of architecture, a number of public buildings were designed and built in the last decade based upon a variety of concepts. There was utter confusion among the architects as to what should be the appropriate architecture of Lahore.

Another important building that appeared on the map was the Lahore Church of Resurrection. Lahore did not have its own building by this time. The diocese of Lahore was carved out from the Diocese of Calcutta and Bombay in 1877 under the Act of the British Parliament. Thomas Valpy French was consecrated Bishop of Lahore at Westminster Abbey in London on St. Thomas Day on December 21, 1877 by the Archbishop of Canterbury. One of the main concerns of the new bishop was to build a monumental cathedral befitting the city of Lahore. The Government of the Punjab contributed Rs. 50,000 but all the rest had to be raised from voluntary donations. The site was originally acquired by Lieutenant Governor Robert Montgomery for new station church in 1874. It was much smaller in size. As soon as French arrived in Lahore as Bishop, he visited the site. He called a conference of leading people and proposed a cathedral "built worthily of God and a great diocese (Vivienne, Stacey, 1993: 75)." French took profound interest in the project and without his active involvement the project would not have been finished by 1887. The project was designed by John Oldrid Scott in the Early English decorated style. John Oldrid Scott was the son of Sir George Gilbert Scott (Morris and Winchester, 2005: 176). Both father and son were specialists in designing churches and cathedrals. Mr. Scott was requested to draw new plans and adapt the existing foundations as far as possible. The actual dimensions of the structure were 226 feet in length, 153 feet in breadth at the transept. The nave was 110 feet long and 30 feet broad. The church was designed to seat 800 persons. The two towers were added in 1898 with tall steeples, which were taken down for safety reasons after the earthquake of 1911. Lahore Cathedral is famous for its Taxila cross erected inside the cathedral and its stained glass windows, bells, pipe organ and a clock from 1862 which rests in the top floor of the northwest tower, now disused, with a clock bell hung from a portion of the clock-case.

Lahore Church of Resurrection

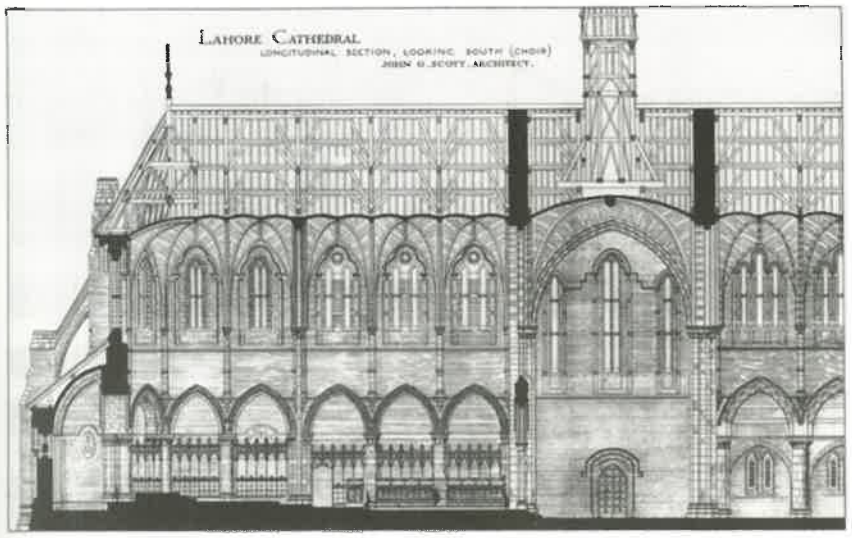
The best example of Indo Saracenic architecture is the Punjab High Court building completed in March 1889. The building was designed by J. W. Brossington, consulting architect of Madras (Latif, 1892: 284). The architect had strong inspiration from the works of Robert Fellowes Chisholm. This quadrangle building was built in burnt bricks using lime mortar. However, the front arches of the Judges Veranda, porch and portions of the main towers, were built of Noshehra marble. Special molded bricks were used in cornices, mouldings, friezes, overhangs and other decorative features such as *jalis* (trellis) to fill the upper portion of arches. The roof of the main court rooms is double-pitched, supported on wooden trusses, and covered with clay tiles. The ogee-shaped pointed engrailed arches were used throughout the building. The main feature of the building was the central portion which had a porch in the front and a *naqqar khana* gallery on its rear side. It was flanked by two towers having a square base and projecting eaves at the top over which rose a circular shaft having flutes inspired from Qutb Minar. It was finally topped with projecting balconies over which rested a domed pavilion. A *muqarnas* cornice ran along the arcaded verandah. Within the structures both element from European and local indigenous architecture had been used. The elements were very neatly detailed out in fine proportion.

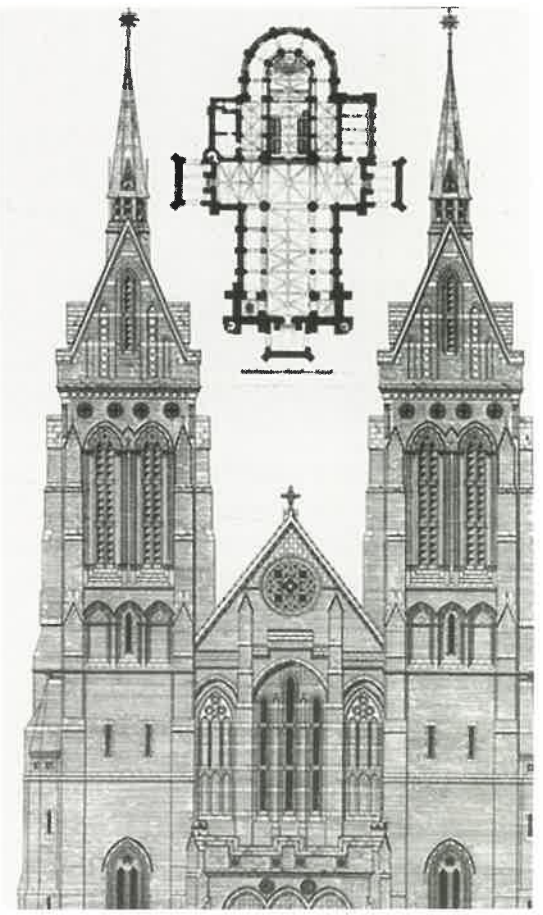


Plan of Lahore and Environs (1893) (top)

Plan of Lahore Catherdral (bottom left)

Sectional elevation of Lahore Cathedral (bottom right)





Plan of Civil Station Lahore: 1907

This plan of the Walled City of Lahore is quite comprehensive in terms of description of all important roads and buildings. Although the plan is not accurately drawn, it gives a fair amount of information about overall development in the city. The street widths are slightly more than the actual size and the River Ravi is shown close to the city, although it had changed its course a long time ago as shown in the previous maps.

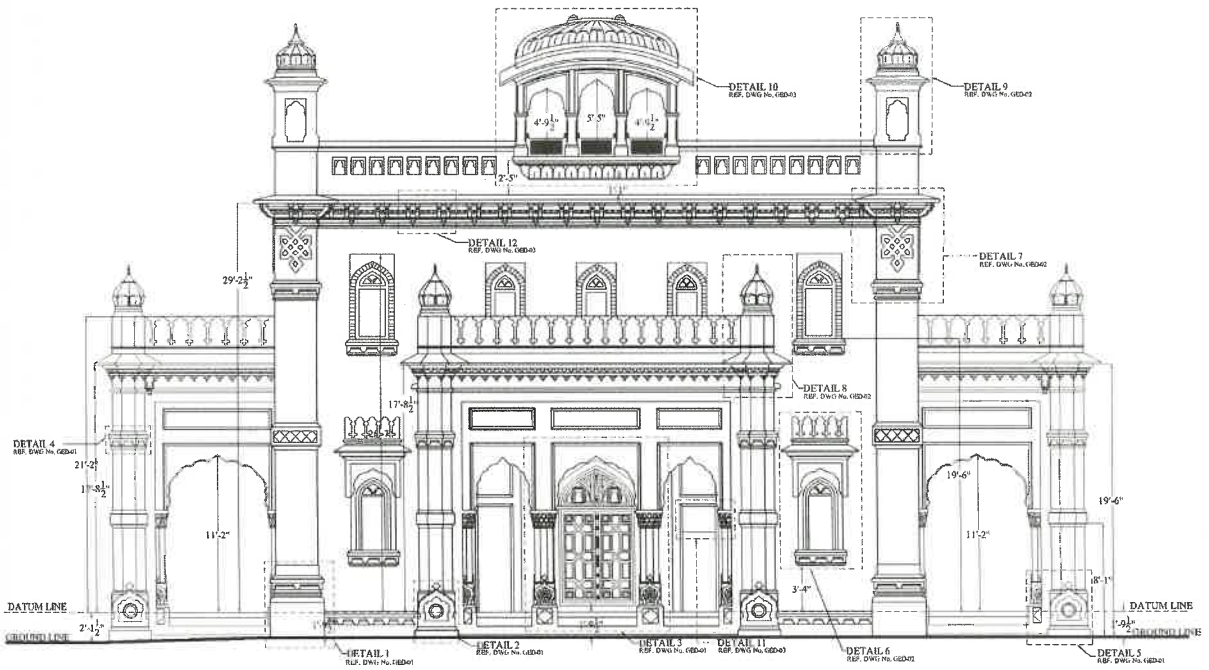
The streetscape of Kashmiri Bazaar was extremely rich at the turn of the 19th century. "A few steps farther on," writes Lord Weeks," while moving from Wazir Khan Masjid towards Golden Mosque and the wealth of old woodwork becomes fairly prodigal; the side streets, as well as this main artery, give one the impression that each household has vied to outdo its neighbor in throwing out these crowded ranks of beautiful windows, and in covering every inch of wall with decoration and with color. Where the windows do not project they are made interesting by complicated stucco moldings, by panels of painted flowers, by courses of glazed red and blue bricks, and they usually open upon a long wooden balcony, high enough for one to sit and look down through the interstices of the wooden gratings. Even the under sides overhanging the street, and the brackets, are richly painted, and often mirrors are inserted in the centers of elaborate rosettes. Peacocks of tinted stucco perch on the white domes of the windows, and the peacocks of painted wood, twisted into the shape of brackets, uphold the rows of great square 'moussarabies. At one end of this marvelous street there is a perspective of golden dome and at the other end tower the lofty minars of Vazir Khan. Beyond the group of golden domes, and near the extreme end of the street, there is a house front most lavishly decorated by the painters brush (Weeks, 1896:181)."

One of the major landmarks of Lahore of this time was the Sacred Heart Cathedral located at the junction of Temple Road and Lawrence Road. It was consecrated by Bishop Fabian Eastermans, made Bishop of Lahore on 19th November 1907. The cathedral was designed according to Roman Byzantine style by Belgium architect Dr. Dubbeleere of Antwerp.

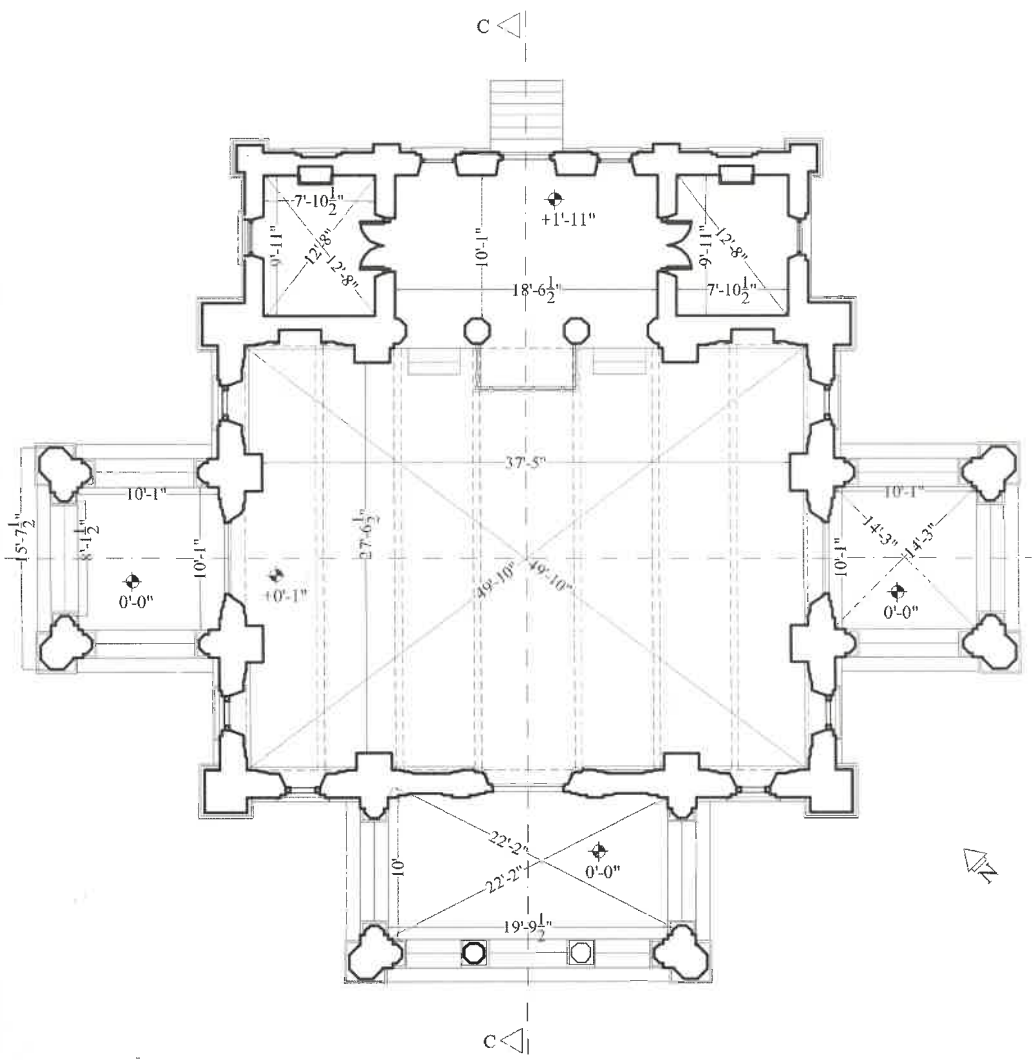
Sacred Heart Cathedral

From 1880 to 1911, Lahore witnessed Bhai Ram Singh as one of the most creative and innovative architects in its history. He produced a number of most prestigious buildings in fair-face brickwork. Born in Jalandhar in 1858, he got his initial training in carpentry in 1874 and a year later he got enrolled at the Mayo School of Industrial Arts. During his stay at the school, he participated

in a number of exhibitions with his furniture products. John Lockwood Kipling, Mayo School of Arts principal, discovered the talent of this young man and gave him special tasks. In 1881-82, Bhai Ram Singh did his first architectural project of the design of Mayo School of Arts under the direction of J. L. Kipling. He was now being consulted for prestigious projects. He designed the Khalsa College Amritsar, as well as the interior of the Darbar Hall (Indian Room) at Osborn House in England. Other important projects included Boarding House at Government College, Lahore and Khalsa College and a boarding house at Amritsar. His real professional career started in 1894, when he was appointed drawing and carpentry master and officiating vice principal of Mayo School of Arts in 1894. At this point, he designed Malik Umar Hayat Khan's house at Kalra State (1893-94), offered furniture designs (screens, tables) for Government House, Lahore and did the interior for New Mission Church at Peshawar. Bhai Ram Singh became the vice principal of Mayo School on December 1, 1896 and principal on September 24, 1910. He retired from service in October 1913. He designed gurudwaras and *dharamsalas* at Amritsar and Taran Taran (Vandal and Vandal, 2006: 244-248).



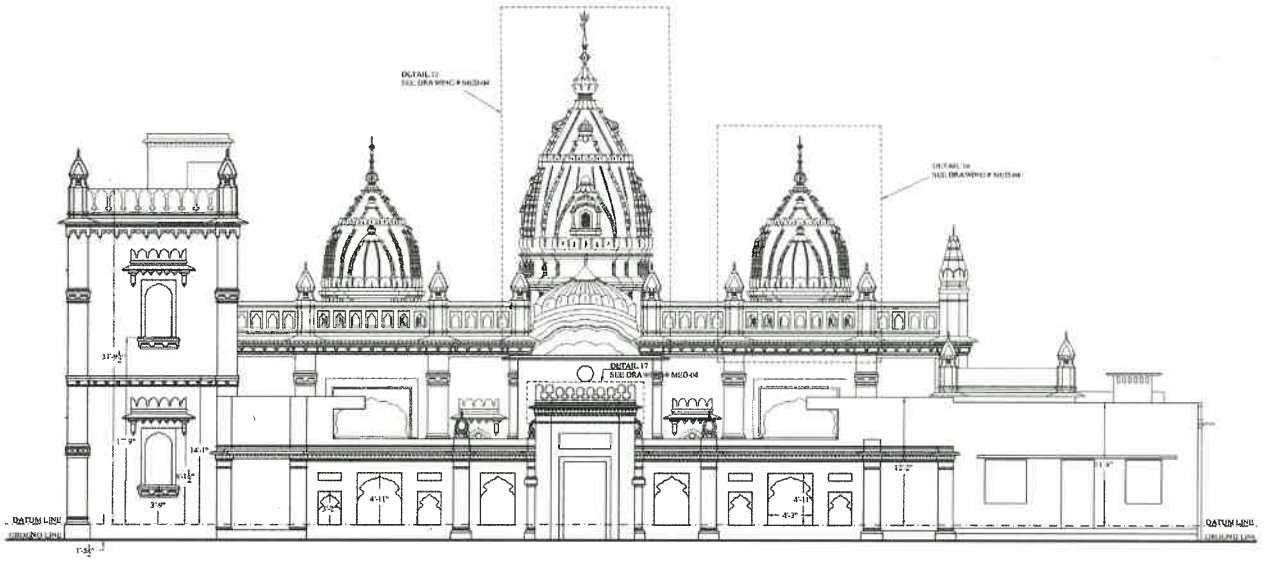
Plan (bottom) and West elevation of Gurudwara at Aitchison College, Lahore.

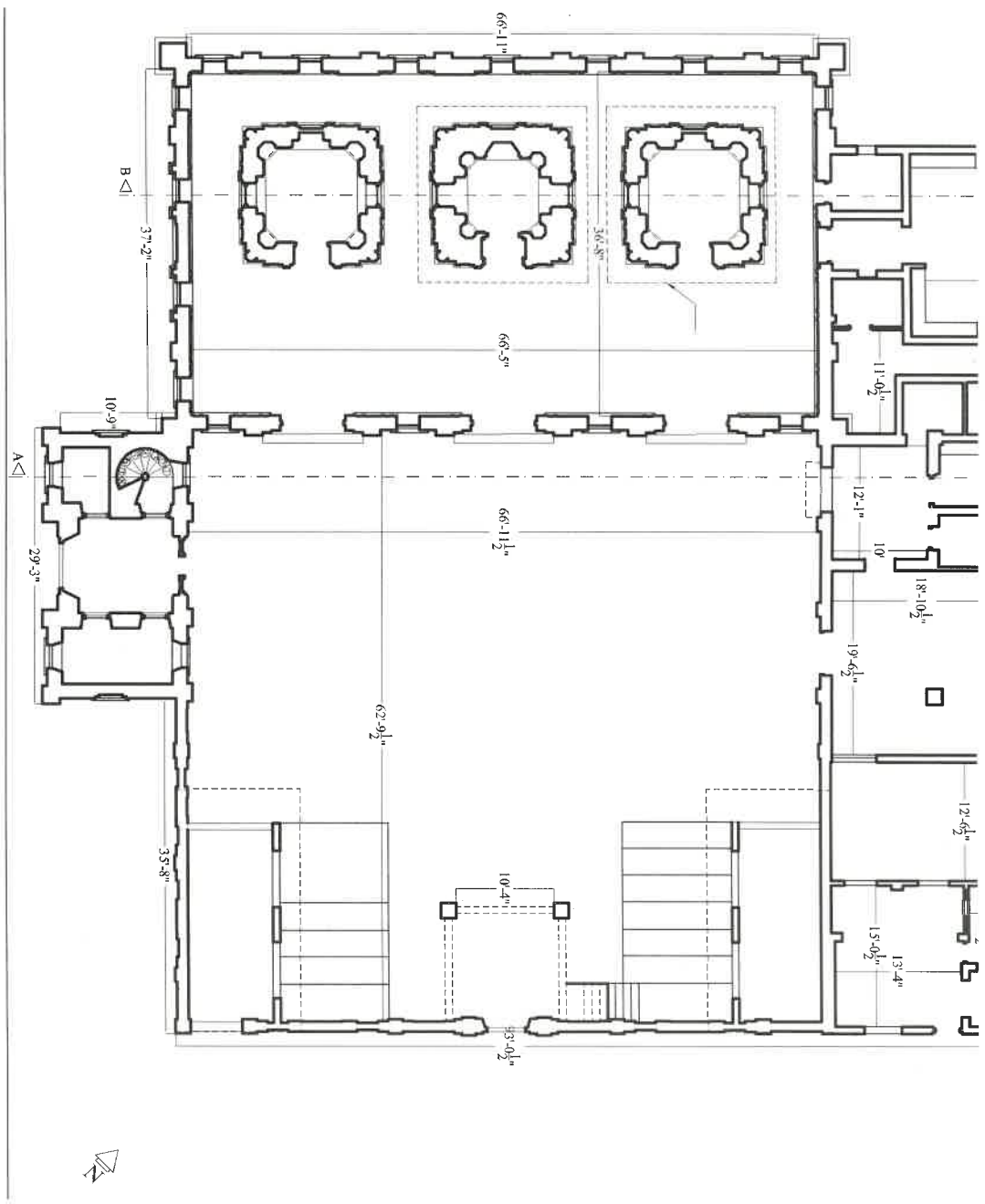


One of the greatest things in his work was his unity of concept throughout the interior as well as exterior of the building. He rigorously maintained the same design vocabulary both in the interior and exterior. He handled brick like a soft wood and executed even minute details to its mastery. A variety of specially molded as well as carved bricks were used throughout the buildings to achieve the desired objective. He very well understood the potential of local materials, drew inspiration from traditional architecture and produced works with his own distinctive style which can be ranked among the finest works of the British period.

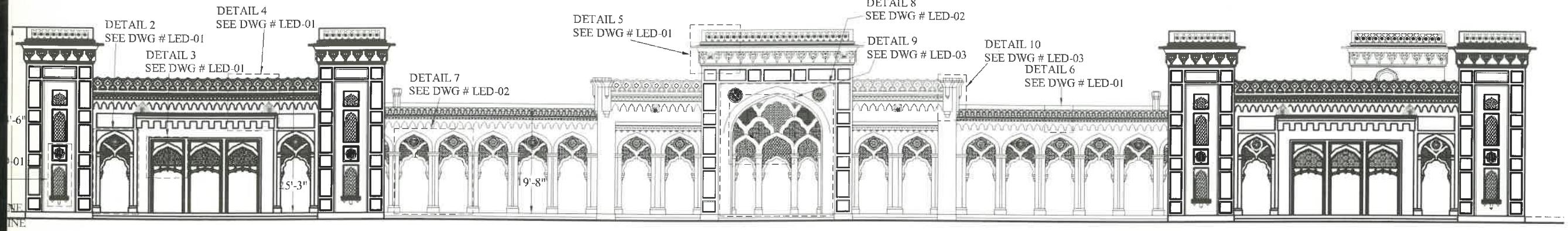
Plan (bottom) and South elevation of Mandir at Aitchison College, Lahore.

Plan of Godley House, Aitchison College, Lahore. (opposite page)

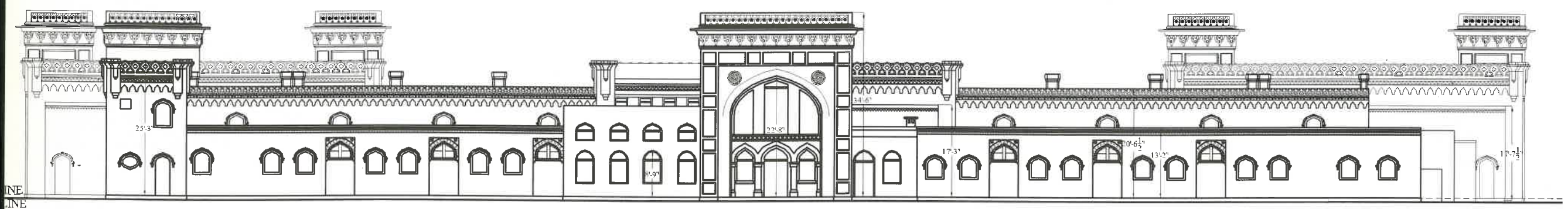




PLAN OF QUARTER

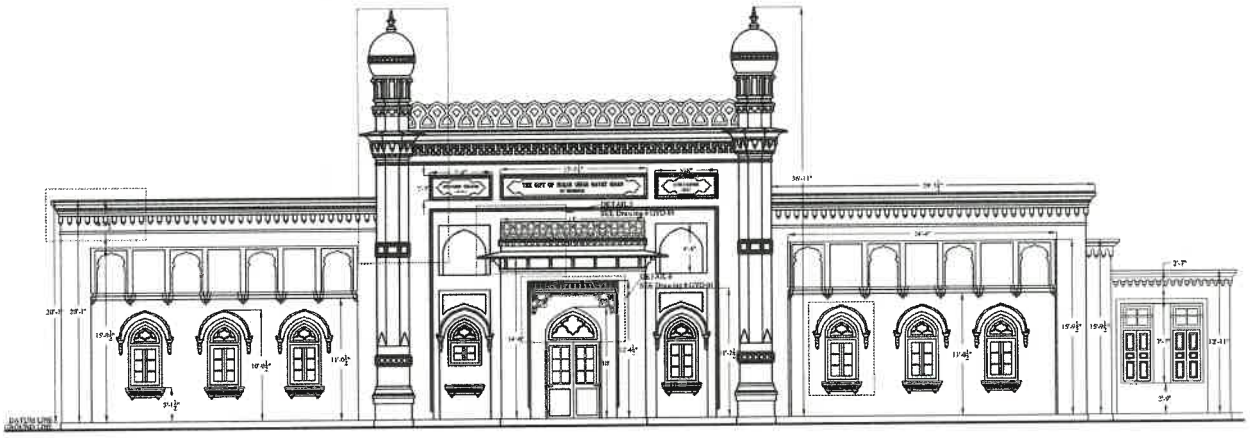


SOUTH WEST ELEVATION

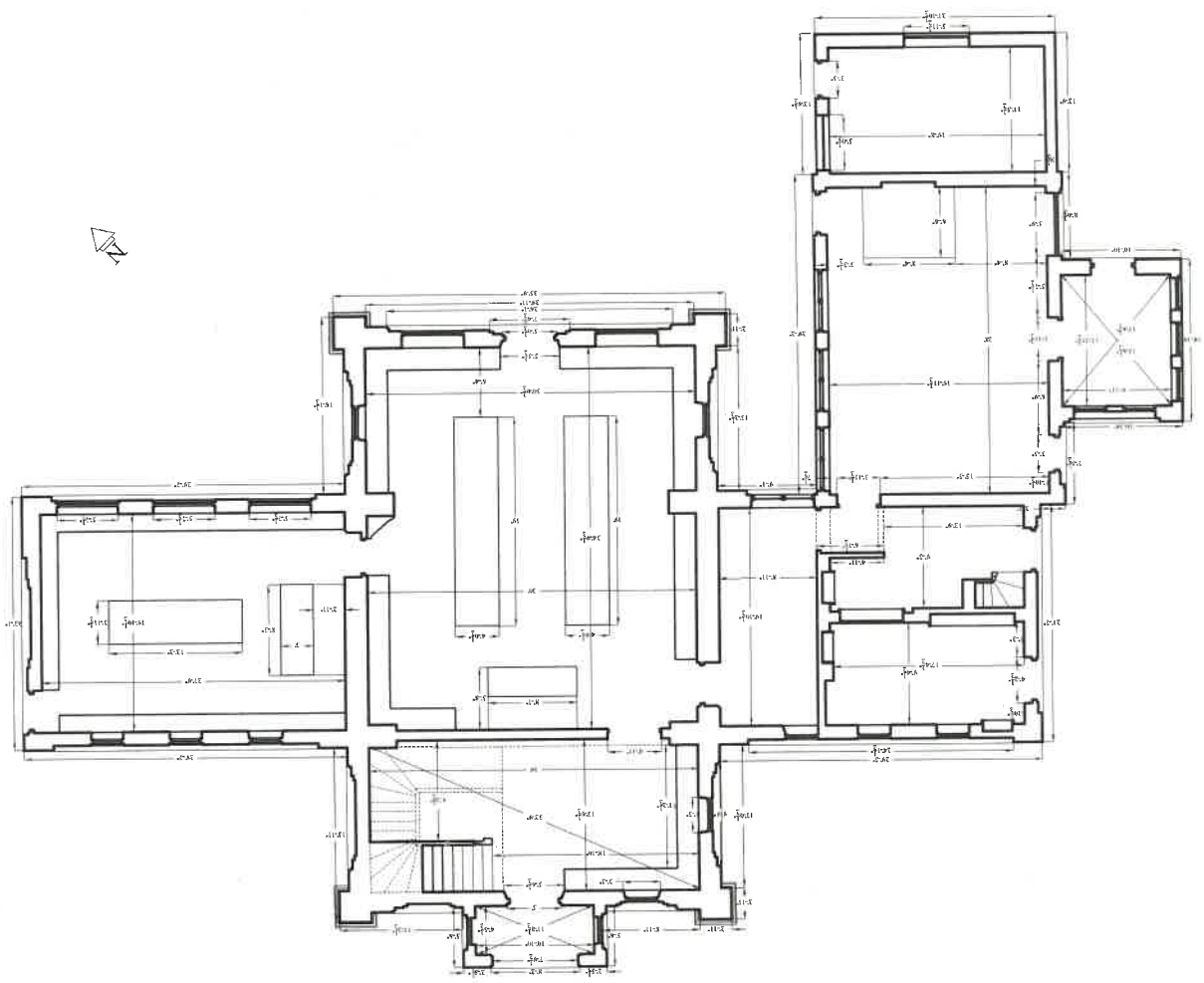


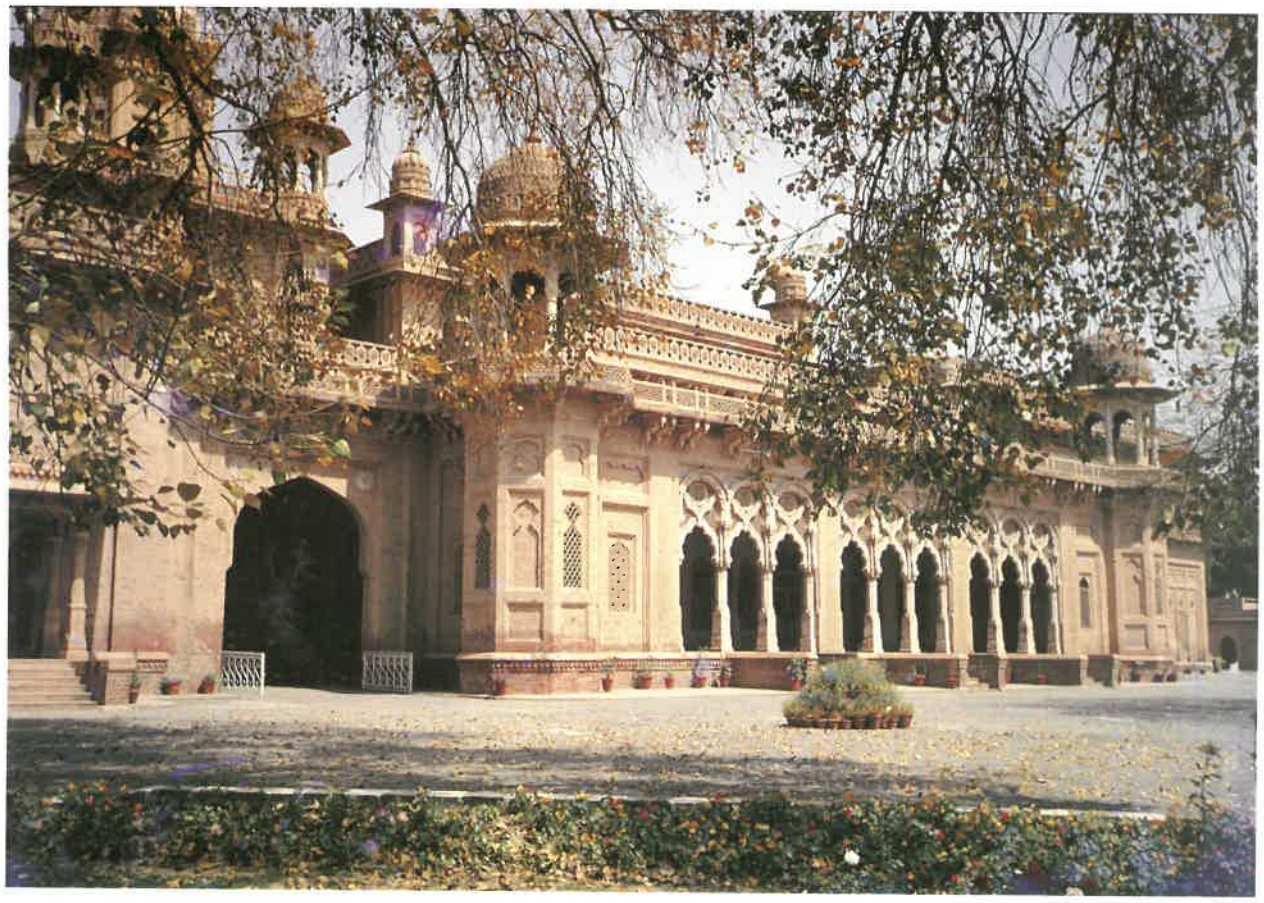
There is a long list of projects undertaken by him in Lahore, Amritsar, Taran Taran, Srinagar, Peshawar, Lyallpur, Simla and Nabha State etc., but the most important buildings he designed in Lahore are the Boarding House (1881-82), main building of Chief's College, later Aitchison College (designed in 1886 and completed in 1890), Mayo School of Arts and Museum (1888-89), Albert Victor Wing of Mayo Hospital (1890), Boarding House of Government College (1889-90) Punjab National Bank, Anarkali (1904), Punjab University Senate Hall (1905), Punjab University Library (1910), Queen Mary College (1910), and Chamba House (Between 1912-14). Aitchison College was his largest project in which he designed a *gurudwara*, *mandir*, gymnasium, three boarding houses, Bahawalpur House, Principal and Vice Principal's House (from 1890-1907).

On the basis of his professional contributions, he was honored with the titles of Sardar Sahib (01-01-1907), Sardar Bahadur (25-06-1809), and Member of the Victoria Order (12-12-1911)



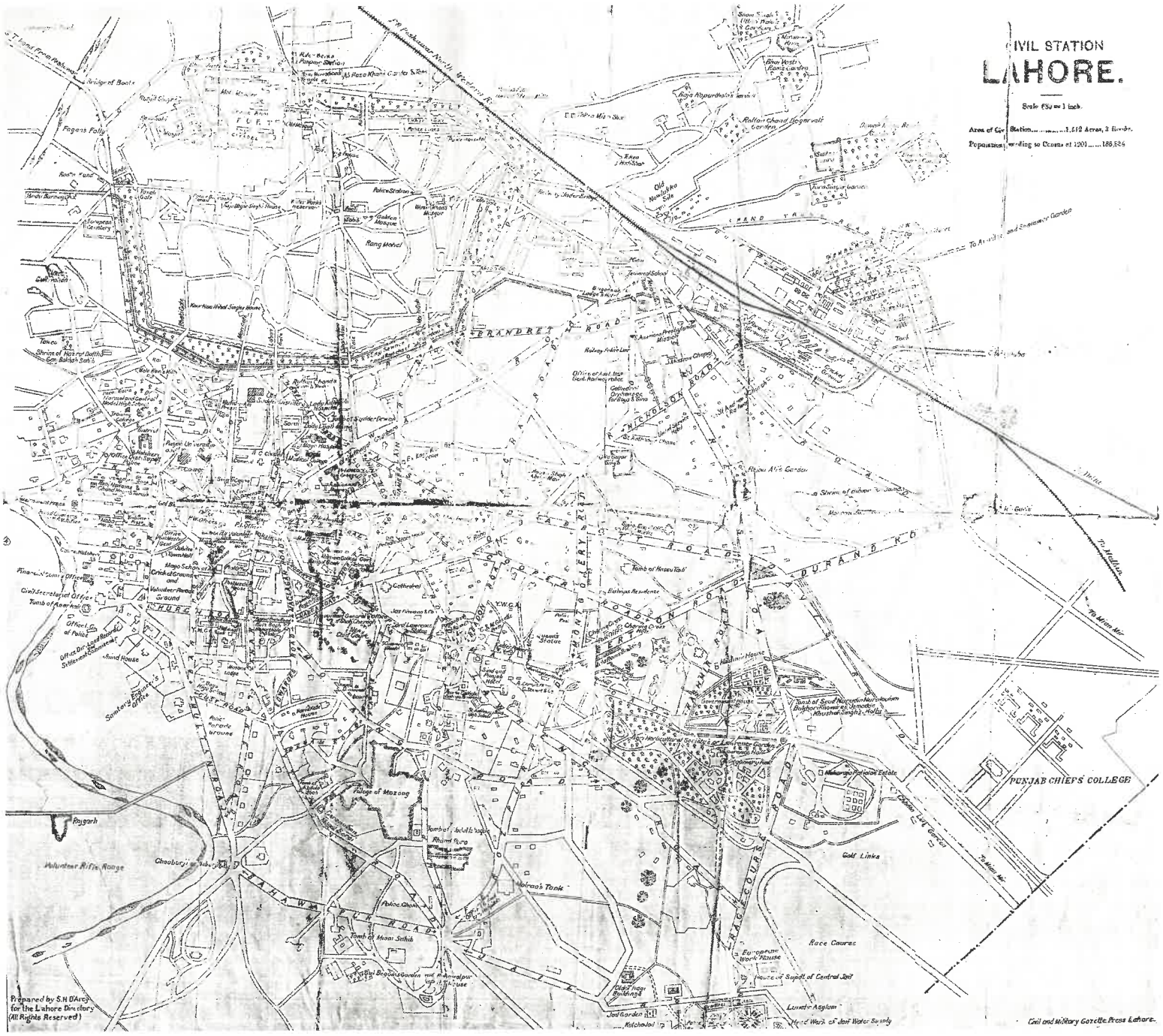
Plan (bottom) and West Elevation of Gymnasium, Aitchison College, Lahore. (top)





South facade of Main building of Aitchison College, Lahore (top)

Southwest view of Lahore Museum (bottom)



Plan of Civil Station, Lahore

Lahore and Environs: 1907

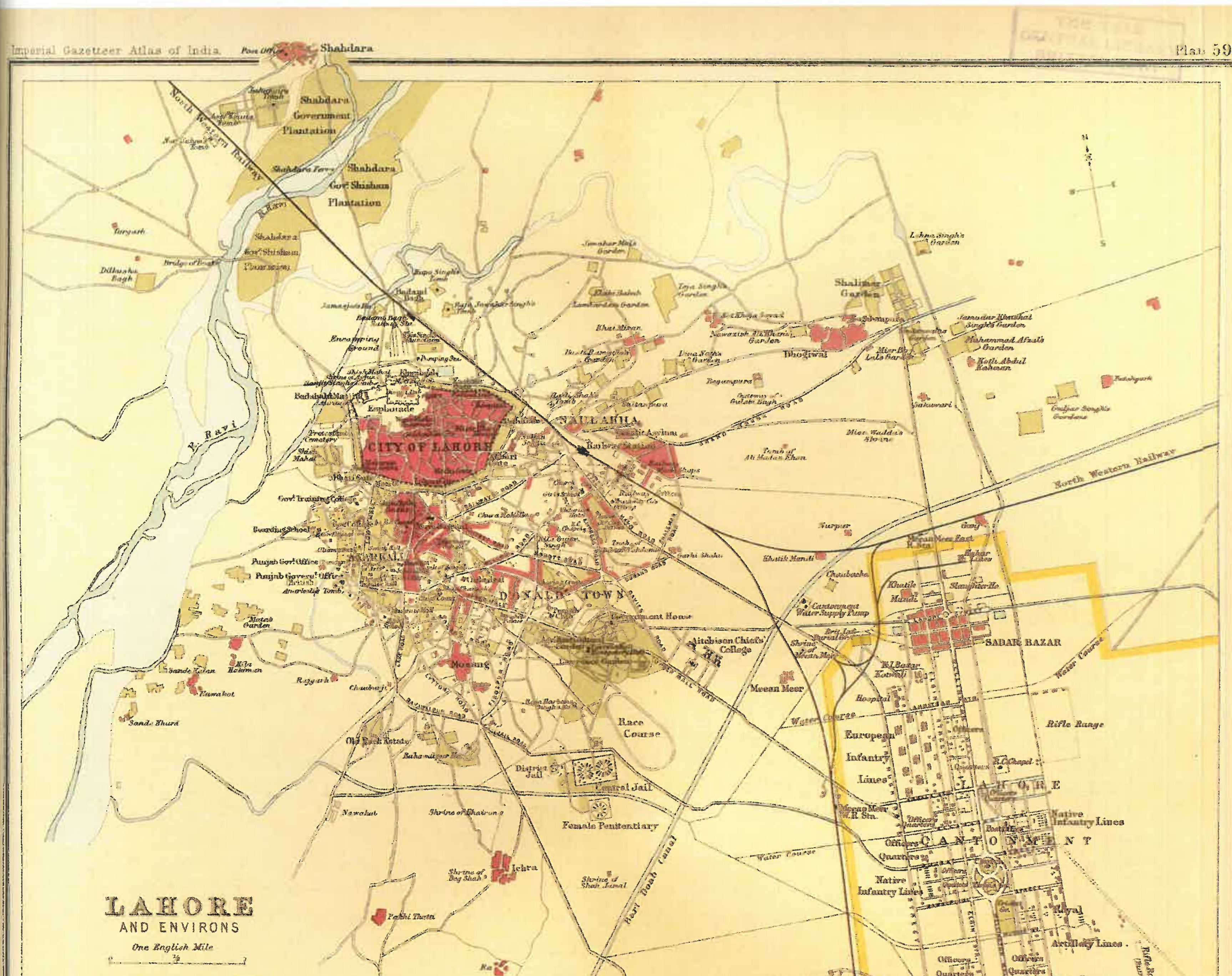
The financial year of 1907-1908 produced important series of maps for the Walled City of Lahore. The map partly covered the Shahdara area in the north, the River Ravi in the west, the shrine of Shah Kamal and village Ravan in the south, Shalamar Gardens in the east and Lahore Cantonment in the southeast of the Walled City.

In this map, the contribution from the British along The Mall is clearly visible. The area up to Mozang was fully developed. Donald Town, an area between Governor's House and new church, appeared for the first time and was reserved for Britishers as well as local elites. Therefore, it became an important residential area of the Lahore city. The gardens which once dominated the land-use plan, can now be seen only in the suburbs of Lahore. The Punjab Chief College was the last building between the city and cantonment. The *loco-motive workshop* was only partially developed, and the land between G.T. Road and Chief College and between Cantonment and workshop remained open. The map shows concentration of gardens between Naulakha, Sultan Pura and Teja Singh Garden, in particular near Khoi Miran.

In April 1899 Lord Curzon, governor general of India, paid Lahore an official visit. Subsequently, major mosques of Lahore were handed over to the Muslims which were previously being used for a variety of purposes by the Sikhs and colonial administration. He also visited the Mosque of Wazir Khan and presented a gift of a pulpit made of teakwood. In 1904, an act for the preservation of ancient monuments was passed. According to the act, a well-conceived scheme, for both the conservation of buildings which had escaped destruction and the exploration of archaeological sites which had remained untouched by this time, was proposed. Both jobs - conservation and exploration - were entrusted to a skilled director-general of Archaeology, aided by a staff of expert assistants in the provinces, and supplied liberally with funds. The department thus, did admirable work, and its reports became more and more interesting every year.

The Lahore Guide 1908 provided the following picture of Lahore and stated that the population of the city was extremely high. The streets were narrow and the houses were generally three to four stories high owing to which some of the streets were completely devoid of sunlight. This often led to complaints of lack of cleanliness.

During the Sikh period, the city was insalubrious, with decaying corpse of animals and stacks of garbage lying in the streets, neighborhoods and markets. The drains flowed in the middle of the streets due to which the market areas were always muddy. There was no municipal administration to take care of cleanliness. With the constitution of municipality during the British period the roads were constructed outside the city. Kankar lime was spread within the bazaar and streets were paved with bricks. Furthermore, a sanitation department was established that resulted in a much cleaner city. Besides, the city was provided with gas and electric lights on roads. The electricity department installed a vast network of overhead cables. Electric fans were provided to offices and courtrooms. Clean water was supplied to the city.



Lahore and Environs
(1907)

Lahore: 1914

Lahore achieved its basic structural form by the end of 19th century. The beginning of the twentieth century marked a new era when the design of squares and urban spaces received more attention. By 1914, the junction of The Mall and Ferozepur Road (Charing Cross), McLeod Road and Abbot Road (Lakshmi Square) or the area around the tomb of Abdul Razzaq (Nila Gumbad) had not achieved any spatial character yet. King Edward Memorial Scheme (sanctioned on January 6, 1914, at an estimated cost of Rs. 36 lacs), new Civil Secretariat, Government Officers' Residence and an extension and alteration of Governor's House were initiated. The vast area south east of the Walled City comprised open grounds filled with trees. However, public buildings began to emerge on either side of the roads. The densest construction outside the Walled City was around Anarkali Bazar up to Kuri Bagh or Jain Mandir. There was very little construction outside the city wall across Circular Road. The major structures that existed in front of the gates were *sarais.* Thus, the map of 1914 shows Sarai Ratan Chand in front of Shah Alam Gate and Sarai Sultan in between Akbari Gate and the railway station. Punjab Chief College (Aitchison College) was the last major architectural project in the southeast side of the civil station. The area along Empress Road and Davis Road mostly remained undeveloped as yet.

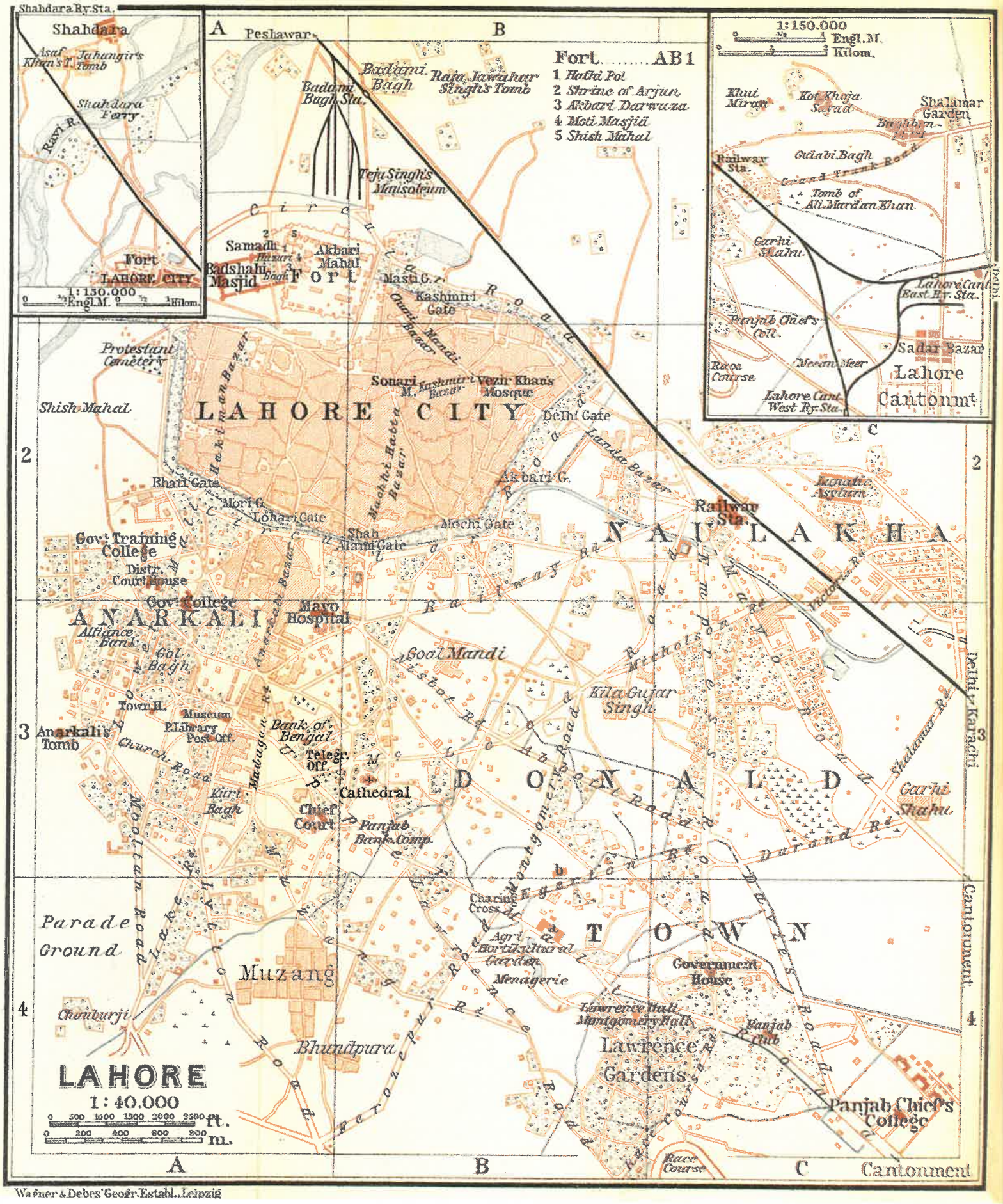
Veterinary College was initially located close to Mayo Hospital. The extension of the hospital required more space to accommodate additional buildings. Therefore, a new site for Veterinary College was selected west of Government Training College and District Court House. The construction of a new college was kicked off on December 17, 1913. The project was designed by John Begg, who was the consulting architect to the Government of India. By June 1914, seven buildings had been completed up to roof level. The estimated cost of the project was Rs 671,072.

In 1914, improvements were made in Hazuri Bagh at a cost of Rs 23, 427. The garden remained much neglected and transformed into a jungle. It was leveled and grassed, paths were made between rectangular grassy plots and trees were planted. Raised masonry water channels and fountains were built. During the same time, restoration of the façade of the Badshahi Mosque was completed.

The most important landscape feature of the map is the alignment of an open water channel (city *rajba*) drawn from the canal near Shalamar Gardens to irrigate Circular Garden. The water channel originated from the canal near Mughalpura, ran parallel to Grand Trunk Road close to Ali Mardan Khan's tomb and then entered Station Colony and continued towards the west crossing the Railway Station and Sarai Sultan. This channel also irrigated the lawns of bungalows built for Railway officials.

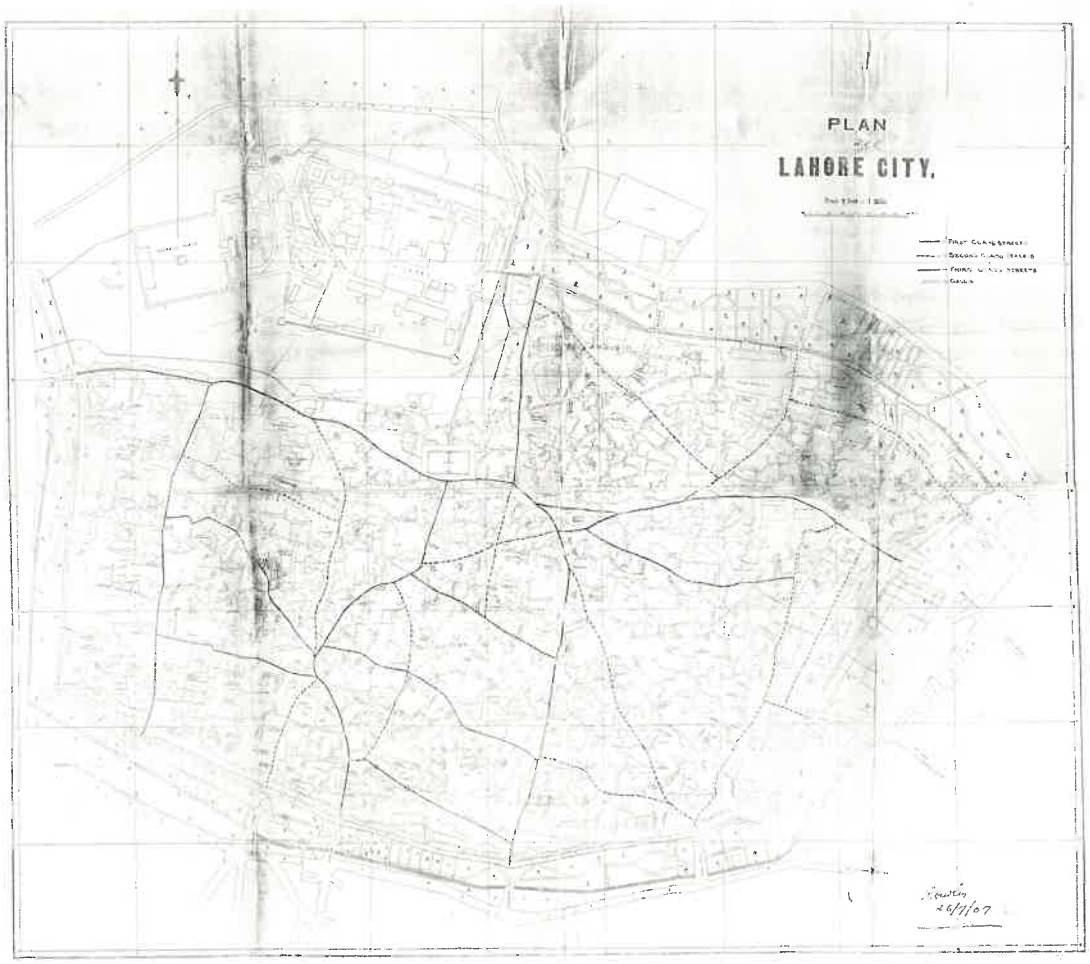
The construction of a road bridge over River Ravi, started in 1913 was in progress. The bridge comprised 9 spans, each 90 feet 9 inches long. It was built 150 yards below the existing railway bridge. The bridge was founded on octagonal wells 18 feet in diameter, sunk to a depth of about 70 feet below water level. The height of the piers was approximately 18 feet (PWD, 1914: 4). The depth of the roadway was 18 feet 9 inches between wheel guards. The surface was tarmacadom on steel trough plates which were supported by rolled steel joists, 12" × 6" in section, placed traversally on the main girders. The girders were those belonging to the old railway and the road bridge which were removed when the line was doubled. The total cost of the project was Rs. 5 36, 952.

The Lahore Electric Supply Company was the first licensed public supply company which commenced supplying energy to public and the government on November 18, 1912. There had been great demand for energy; both for power and lighting, and the substitution of electric fans for *punkhas* in offices and homes was greatly appreciated (PWD, 14: 9).



Plan of Lahore (1914)

Detailed Maps of Lahore



Plan of Lahore City

Basil M Sullivan, the consulting architect to the Government of the Punjab from 1913 to 1938, felt a strong need for accurate detailed maps of Lahore to design meaningful spaces and urban environments. Therefore, in 1920 detailed physical surveys were carried out to document, roads, buildings, open spaces and other landscape features within the municipal limits of Lahore. The maps on the following pages illustrate the detailed land uses, construction density and patterns of urban development.

Lahore City Survey: 1907-08 (Cadastral Maps)

In 1908, a topographical survey of the Walled City was published based on the 1907-08 survey. These maps were produced by Survey of India. Around thirty sheets at the scale of 1 inch = 40 feet and 1 inch = 50 feet for most of the areas of Lahore were prepared. These maps were produced for the Settlement Department, Punjab (i.e., Revenue and Taxation). They present valuable information about property, its open spaces and streets. They have extraordinary value of land use planning. They reflect the highest standards of measurement and map production of densely populated areas at that time. In the survey sheets, the names of major streets and bazaars are given, making them extremely helpful in locating individual properties. The original sheets are pink in color.

Akbari Mandi

Attar Singh Gali (above)

Mochi Gate (below)

Bhatti Gate: Tavela Sheikh Imam Din

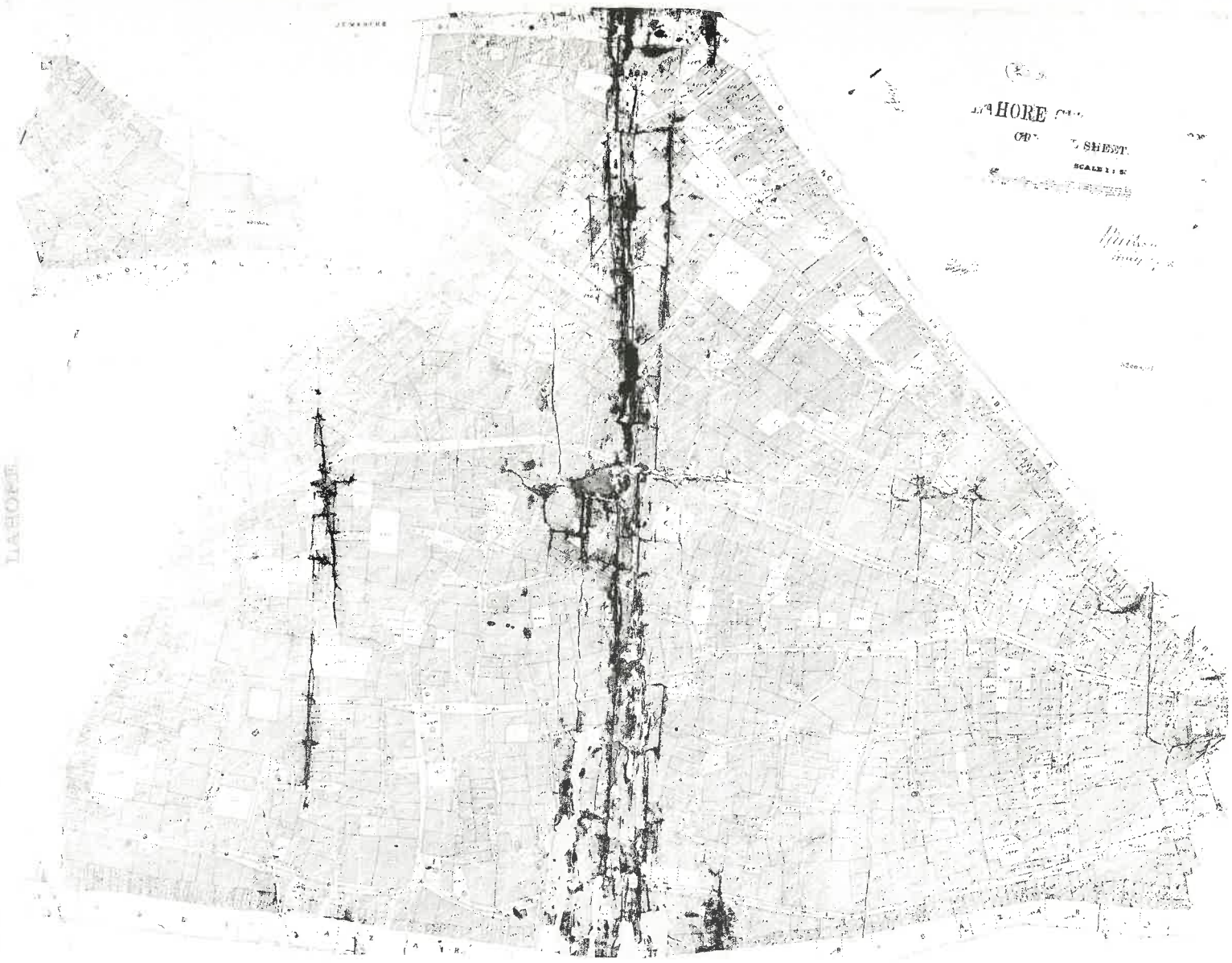
Mohalla Chabak Sawaran & Kasera Bazaar (top - opposite page)

Chohatta Dina Nath: Yakki Gate (bottom - opposite page)

SHEET No. 23A.
(19)

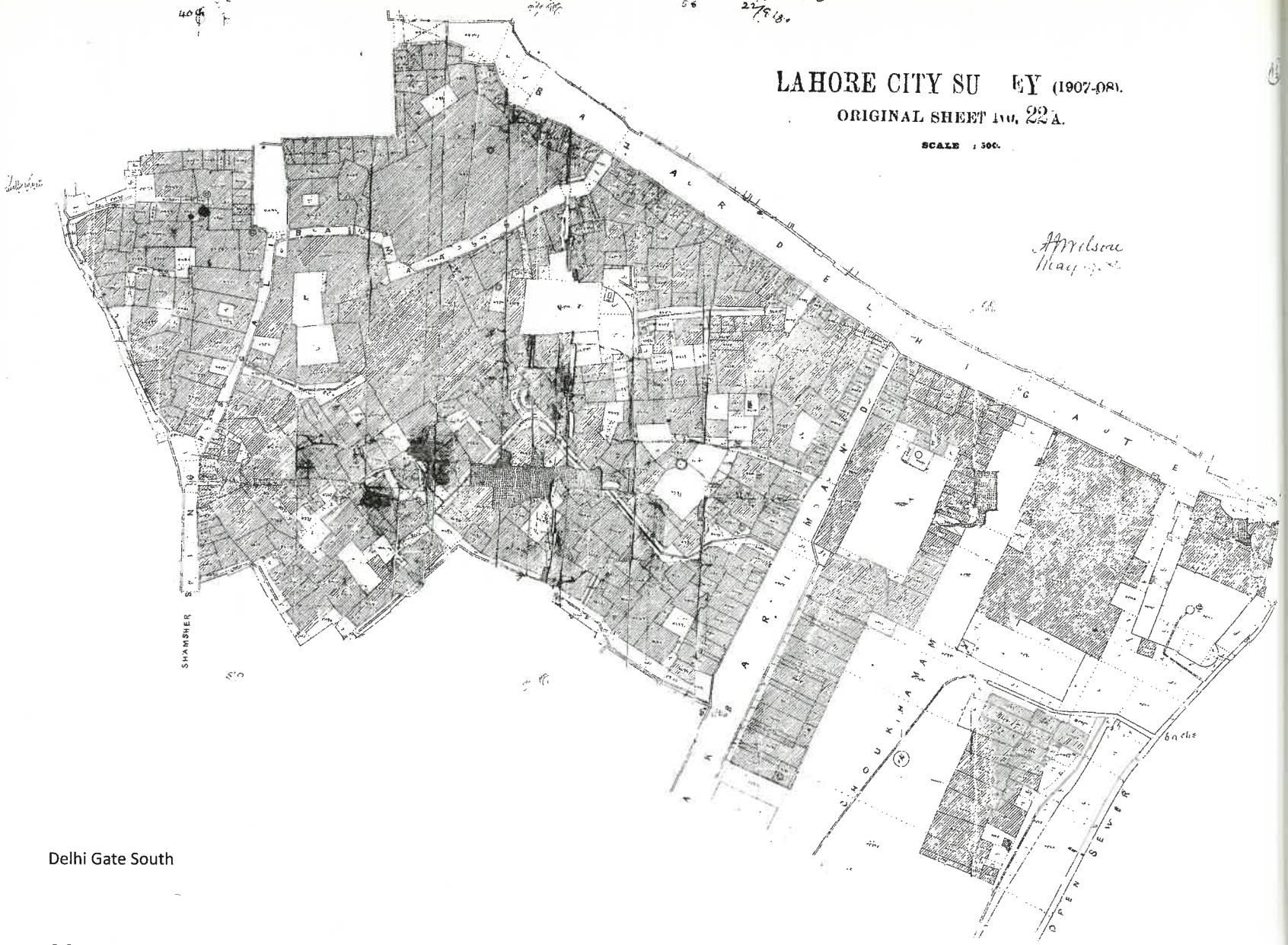
Chowk Mati (top)

Dalhi & Kasera Bazar (bottom)



Dabbi Bazaar (top)

Delhi Gate North (bottom)



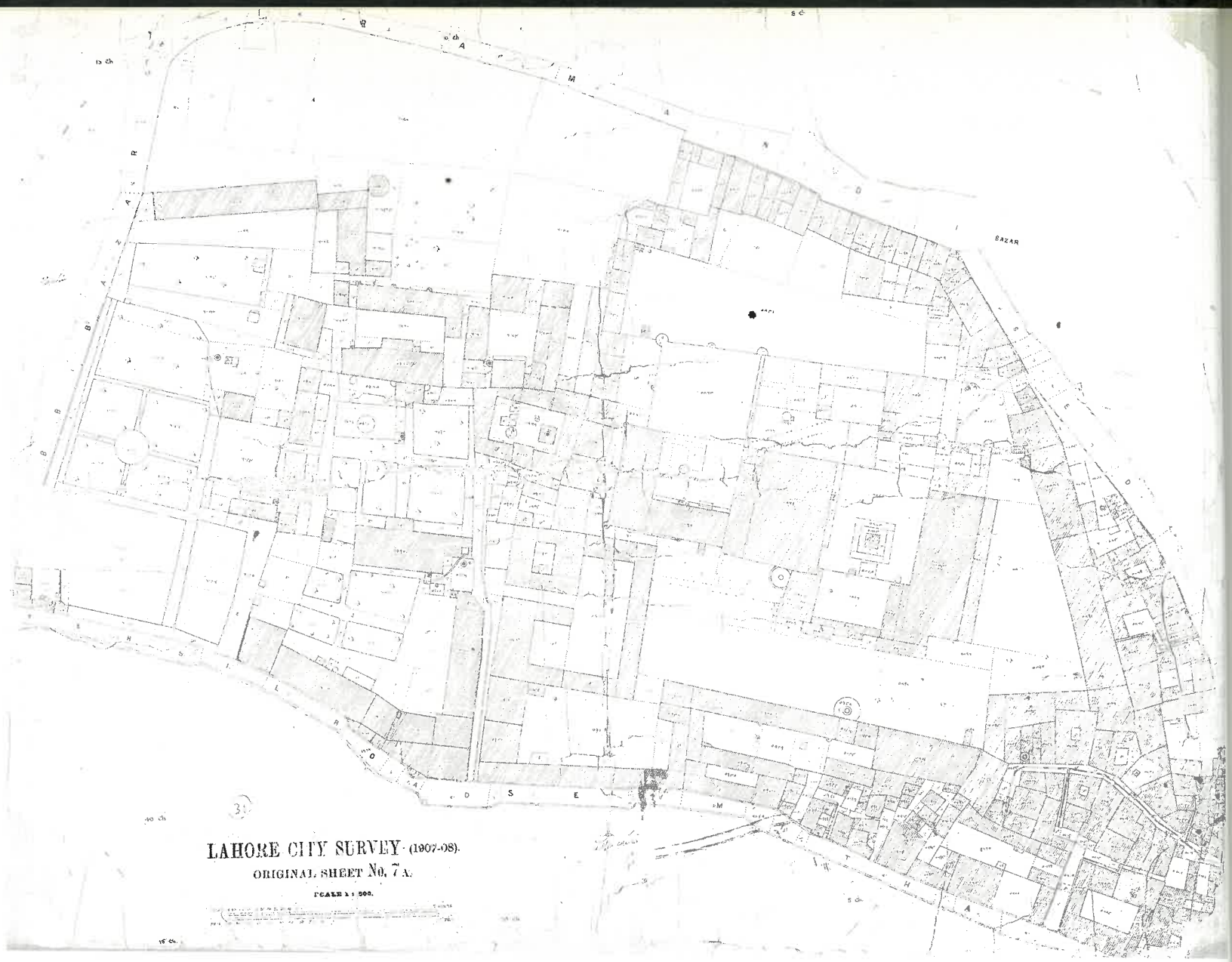
Delhi Gate South

Sed Mitha Bazaar & Fasil Road (above)

Hatta Bazaar & Khajor Gali (below)

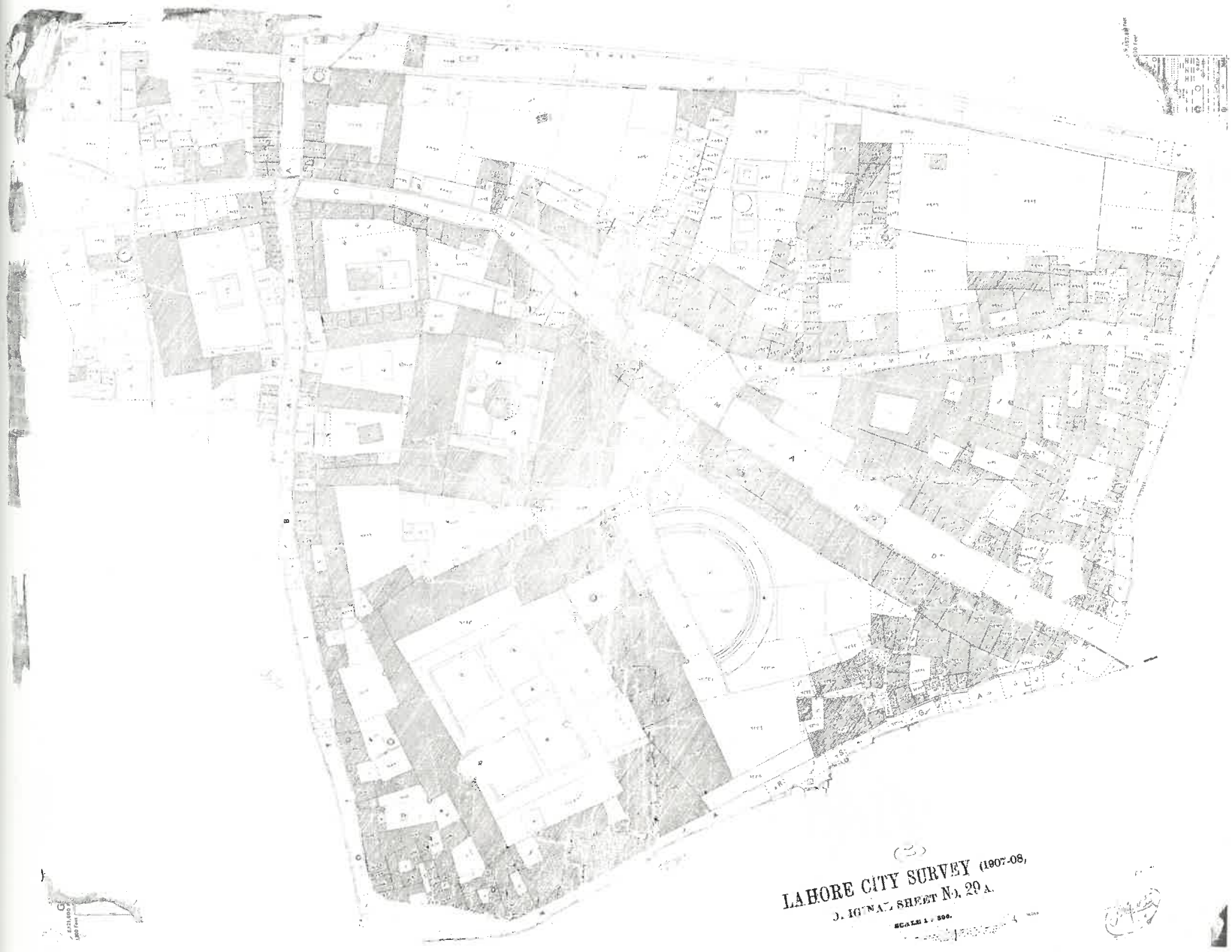
Haveli Dhyan Singh & Sad Mitha Bazaar (above)

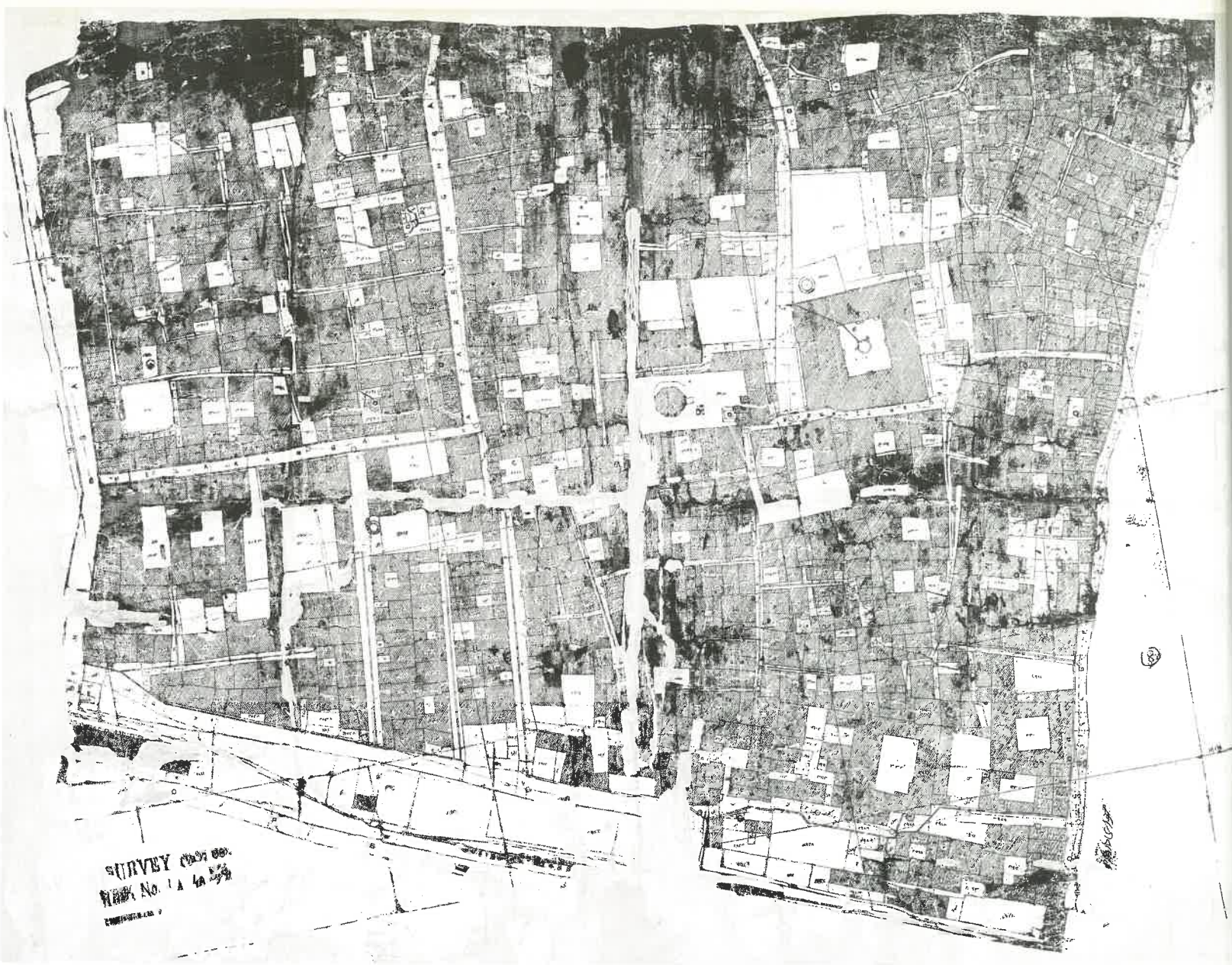
Jogan Gali and Sammian (below)



Kashmiri Gate (above)

Kashmiri Bazaar (below)

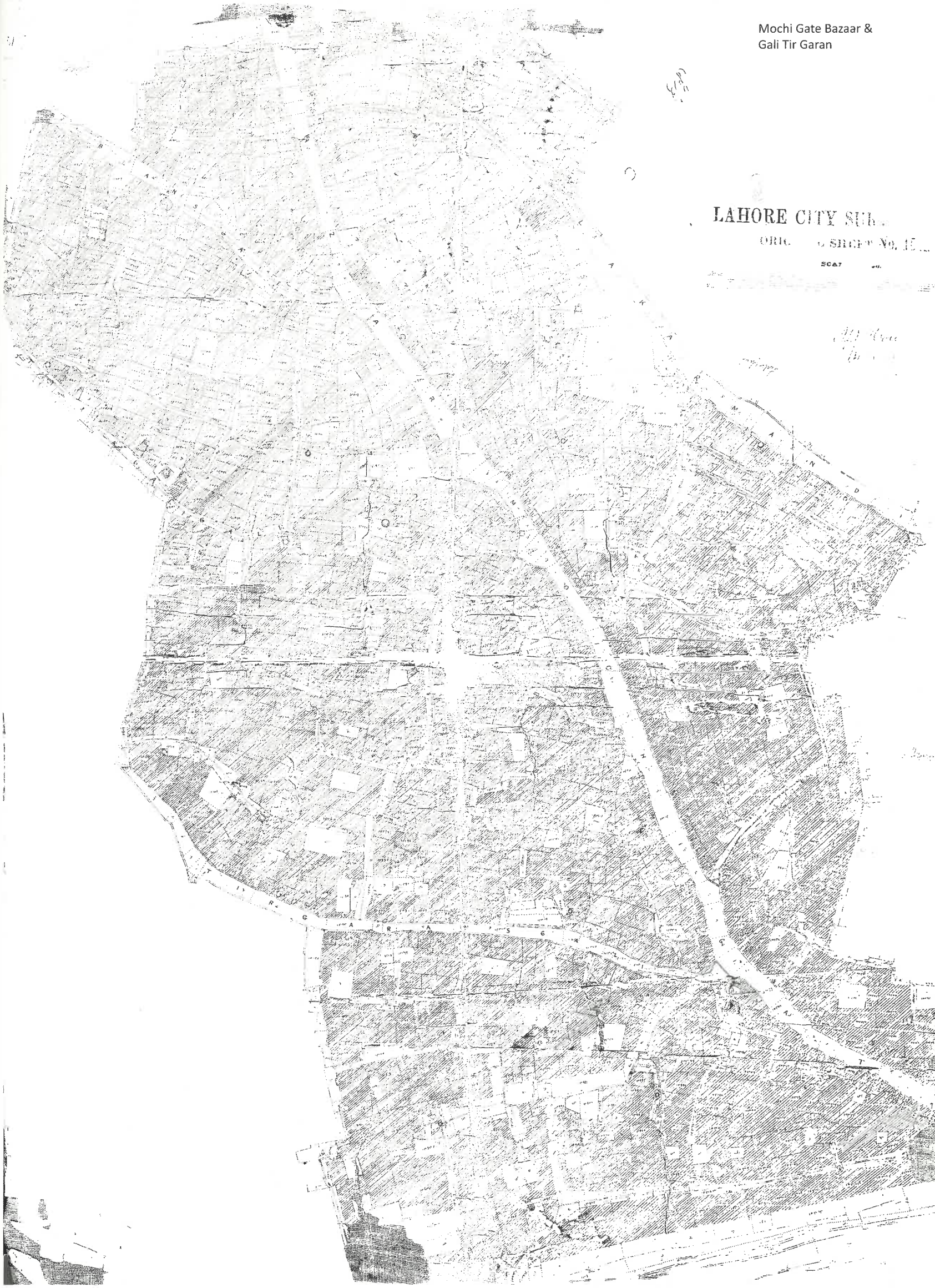




Mela Ram, Atar Singh (above)

Mochi-Akbari Gate (below)

Mochi Gate Bazaar &
Gali Tir Garan



Moti Bazaar (above)

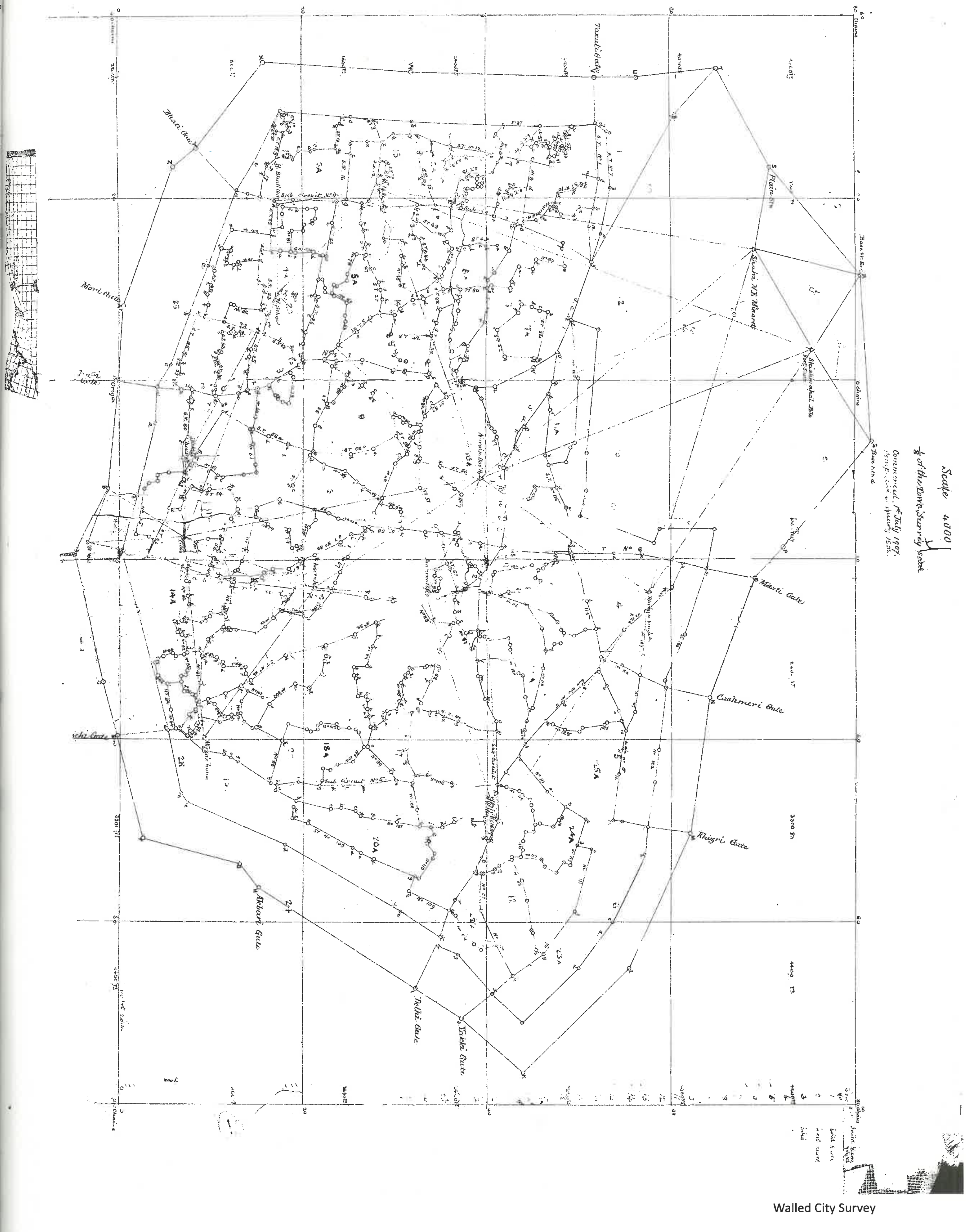
Shah Almi Bazaarzt (below)

Sed Mitha Bazaar (above)

Taxali Gate (below)

Vacho Wali (above)

Wachi Wali & Sed Mitha Bazar (below)



Walled City Survey

Wazir Khan Mosque &
Mohalla kakezian

Yakki Gate

Walled City of Lahore based on Cadastral Maps 1907-08

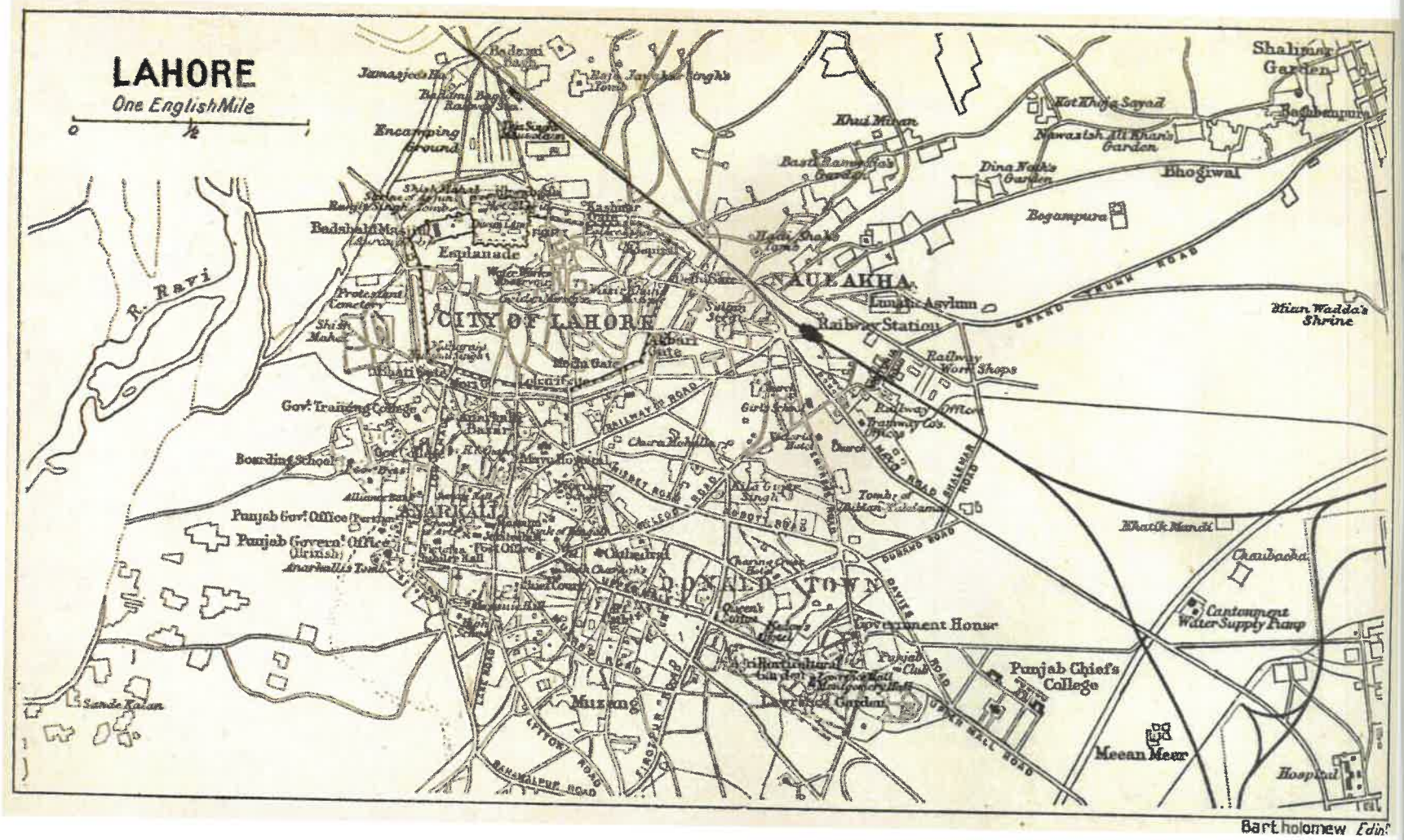
In 1907-08, a detailed survey was undertaken to document all the properties and physical features of the Walled City. As a result, the alignment of all properties was marked. These maps gave for the first time the real land-use picture of the Walled City. The *masavis* gave detailed information on the width and physical layout of the streets, open spaces, plot sizes and wells. In this map, all the *masavis* were joined together to paint a complete picture of the Walled City. The area of Lahore Fort, Badshahi Mosque and the Circular Garden is not included in this map.

Map of Walled City of Lahore (1907-08) based on Cadestral Map of Lahore

Lahore: 1912

This map was published by Bartholow of Edinburgh. It shows clearly the fortification wall around the old city as well as its supporting towers. Lahore, by this time, had largely developed up to Mozang in the south, and the railway station and adjoining areas in the east. However urban growth on the western side was limited to a boarding school and Civil Lines. The map shows important buildings, tombs, gardens and settlements. The most important settlements highlighted in this map were Donald Town, Naulakha, City of Lahore (the Walled City), Anarkali and Mozang. Other important features of the map are Grand Trunk Road and Bhogiwal Road, the latter passes along Bhogiwal village and Dina Nath Garden and joins Grand Trunk Road near the Shalamar Garden. The shrines mentioned are Mian Wadda, Bibi Pakdaman, Hadi Shah and Mian Mir. The Sikh shrines included in the map are Raja Jawahar Singh's tomb, Teja Singh Mausoleum, Ranjit Singh's tomb and Arjun Singh's shrine. Besides Shalamar, the other important gardens shown are Basti Ramdas Garden, Teja Singh garden, Nawazash Ali Khan Garden. The map shows all the churches developed so far in the colonial city. The two important structures mentioned are Victoria Jubilee Hall (now Town Hall) and Art School (formerly Mayo School of Art and now National College of Arts) The main building of Punjab Chief's College with three boarding houses (Kelly, Godley and Lesley Jones) along with staff quarters occupied an important position on The Mall. In terms of hospitals, Mayo Hospital and a medical facility (Combined Military Hospital) at Cantonment are mentioned.

Lahore 1912



The map indicated that Lahore which by this time had become a multicultural city, contained Hindu, Muslim, Sikh and British monuments spread all over the town. In terms of Mughal monuments, Mian Mir, Begumpura, Bhogiwal are most significant. Therefore, the inner city and suburban settlements show a strong urban and landscape character. Bhogiwal contained the beautiful tomb garden of Nawab Mian Khan (son of Saad ullah Khan, prime minister of Shah Jahan, d.1671).

In the beginning of the twentieth century there was no architect in the public sector institution until the joining of Basil M. Sullivan in 1914. Prior to that, John Begg, consulting architect of Government of India, used to look after the designs of government institutional buildings.

He joined this position in April 1908 and designed Veterinary College Lahore, the biological and physics laboratories of Government College Lahore, Chief Store Keeper's office at Mughalpura and King Edward Memorial Scheme between Nila Gumbad and Mayo Hospital. The meaning of architectural style appropriate for empire were hotly debated in Colonial India. In 1920 John Begg (1866-1937), consulting architect to Government of India from 1908 until 1921, observed that there were two school of opinion on how to build in India. The first school made the case that British should take the Romans as their model and plant British architecture as well as British notions of Justice, law, culture, and order not only as improvements but also to reflect brilliance of the empire, but civic architecture should reflect all these qualities to the Indians. In contrast, the second school maintained that there was a living tradition in Indian architecture that needed to be nurtured and sustained by curbing outside influences and that the carriers of this living tradition, Indian craftsmen, native architects, or master builders – *mistris* and *stapathi*-needed to be patronized. Begg tentatively named two schools "the Roman School" and "the Swadeshi School respectively; the architectural historian Philip Davies would later called them "the aesthetic imperialists" and "the native revivalists" mentioned earlier in the last chapter. (Chopra, 2011: 31).

In 1911, Act III was passed for municipalities in Punjab. This act provided a wide range of actions ranging from preservation of natural elements, to improvement of roads and streets, the introduction of building byelaws and approval of building plans from municipalities. The objectives and some of the important features of this act as follows:

The municipality might lay out and make new public streets, widen, lengthen, extend, turn, direct, close and discontinue any public street. Any person who erected or re-erected any immovable structure projecting into the street at any point was made punishable with a fine but the committee could grant permission in writing on such conditions as it might deem fit for the safety or convenience of the persons passing by, or dwelling in the neighborhood, and might charge a fee for such permission. The committee may also prohibit construction or re-erection without permission, cutting of trees or traffic generating noise.

In 1912, the Cooperatives Societies Act II was passed which was further strengthened by Act no. XVII of 1919, formed by amending the Land Acquisition Act of 1894. According to the act, cooperative societies may be established which may purchase or sell land to their members. The act played a very effective role and helped to some extent in relieving the housing shortage in bigger cities. Model Town Cooperative Society, one of the best societies in India, was initiated as a result of this act.

The major development that took place in Lahore during this time was the construction of a carriage shop (1908) and Loco Shop (1912) at Mughalpura. Initially located in the area of the Naulakha the lines, workshops and the adjoining railway station covered an area of approximately 126 acres. Subsequently, an area of some 1000 acres was acquired on the eastern edge of Lahore NNW of Mian Mir cantonment between Grand Trunk Road and the main railway line east side of the city leading to Delhi via Amritsar. By 1929 the locomotive shops had 14 acres of covered accommodation and the carriage and wagon shops 27 acres and employed 12, 200 workers (Railway Gazette, 1929: 12-13). The two major establishments drew large population from England and different cities of India. The Delhi Gate area became agglomerated with the migration of population. Physically, the railway and its workshops had a major influence on the land use patterns in colonial Lahore. The railway was both a magnet and a divider: the tracks divided while the station and workshops were strong magnets that attracted not only railway workers and their families—many of whom, Europeans and Eurasians, lived in railway colonies adjacent to lines and the workshop—but also small businesses whose customers included the railway company, railway travelers and railway workers. It was, in fact, the railway workshops and the station, along with the cantonment and civil lines, which represented the nodal points around which colonial Lahore grew (Rudduck, 1964: 117-120).

In the south, Shadi Lal building was constructed in 1909 by Sir Shadi Lal as his residence. The estate covered an area of 31 *kanals*, 19 *marlas* and 125 square feet. This building was designed using traditional architectural elements. It is now being used as Polytechnic Institute for Girls.

Lahore Survey Sheet No. 6: 1911-12

Lahore Survey Sheet No. 6: 1911-12 (opposite page)

This map published by the Survey of India in 1911-12 shows the complete geography of Lahore, particularly its northern and eastern sides. The map provides alignment of major and minor roads, railway line and Lower Bari Doab Canal. The suburban areas of Lahore can be seen as full of plantation. Nullah Dek traverses the area north of the River Ravi. The most important feature is the course of the River Ravi. A branch of the river after traversing the open area north-east of the city, passes close to Lahore Fort and then joins the river towards the west of the Walled City. It is obvious from the map that the major expansion of Lahore took place on the southern and eastern sides. The important settlements on Multan Road were Pakki Thatti, Dholanwal, and Saidpur. Ichhra was a suburban settlement along Ferozepur Road while Baghbanpura, Kotli Abdur Rehman, Fatehgarh, Harbanspura, and Lakhodher were important settlements on the east and northeast of the town. The cantonment area had also been fully developed.

The Shahdara area comprised the tombs of Jahangir, Nur Jahan and Kot Begum. A number of *rakhs* such as Chaoni, Rakh Lehna Singh and Rode Shah are shown. The important areas of Lahore during this time included the Walled City, Anarkali, Donald Town, Naulakha and Qila Gujar Singh.

LAHORE, GUJRANWALA,
SIALKOT & AMRITSAR DISTRICTS.

Season 1911-12

PUNJAB

Mean Magnetic Declination 0° East (in 1912)
(No annual change)

No. 44 I/6

INDEX TO ADJOINING SHEETS

Published under the direction of Colonel S. G. Burrard, C.S.I., R.E., F.R.S., Surveyor General of India.

1913.

Scale 1 inch to 4 Miles, or 1:253,440.

Contours and Orographic heights are approximate.
Forests and jungle are coloured green, cultivation yellow.

Those portions of rivers, streams, canals, lakes, &c. which go dry during certain seasons are shown in blue.

Copies of this map can be obtained from the Survey of India Offices, Map Record & Issue Branch, Calcutta. Price—One Rupee, or with boundaries (including forest boundaries), coloured One Rupee Two Annas.

Lahore Survey Sheet No. 3: 1911-12

Lahore Survey Sheet No. 3: 1911-12 (opposite page)

This particular map shows the suburban area on the southwestern side of the Walled City. From the northeastern corner both Multan Road and the River Ravi move westward and run parallel to each other. The first settlement on Multan Road was Niaz Beg, the site of temple Bhaddar Kali. According to S.M. Latif, the largest fair of Lahore used to be held at this site. The last important station on Multan Road was Manga whereas Raiwind was the last station on the southeastern side. Niaz Beg distributary extension and Kahna distributary traversed the area, irrigating agricultural fields. Along Multan Road, other smaller settlements included Mohlanwal Kalan and Khurd, Shamke Bhattian and Sundar. Towards Raiwind were present smaller villages such as Tarogil, Lakhowal, Manak and Ramkot. Today, the entire area shown in this map is fully developed and modern housing schemes have sprouted up in every direction. Across the river towards northwest is Sharakpur.

LAHORE & GUJRANWALA DISTRICTS. Season 1911-12

PUNJAB

Mean Magnetic Declination 3° East (in 1912) (No annual change)

No. 44 I/3

SHARAKPUR

LAHORE

Sharakpur

Bhaini

Kot Mahmud

Fattuwala

Nurpur Nagan

Faizpur

Khudpur

Ghazipur

Rakh Khuni (PF)

Rakh Farzpur (PF)

Rakh Hiraal Singh (RF)

Rakh Manikhwala (PF)

Jhok Plantation (RF)

Plantation (Forest)

Chung

Kanjra

Khanpur

Ferozepur Road (Metty)

Chanuwal (Brass)

Mohelanwala Kalan

Miraka

Tarugil

Rakh Sultanke (R F)

Rainkot

Rai

Sultanke

Manak

Feji

Kot Bhiki

Kot Kamerian

Kamaske

Raiwind

Rakh Biwal Bhinchoki (PF)

Rakh Mudki (PF)

Rakh Mudki (PF)

Talwara

Nautha

Nautha Khalsa

Bhuchoke Pur (Dhana)

Manga

Bath

Sikanke Bhatti

Nikkana Distributary Extension

Kahna Distributary

RAVI RIVER

RAVI RIVER

Nawan Kot Par

Rangipur

Degh Nala

Chak Fever

Khani Sangran

Kizampura

Phirozewala

Mahla Tarnda

Chak Tibbi

Mureke

Lasoeh

Phalel

Chak Bachoke

Ajaibpura

Index to adjoining sheets.

Scale 1 inch to a

Index to Districts.

GUJRANWALA

LAHORE

Published under the direction of Colonel S. G. Burrard, R.E., F.R.S., Surveyor General of India,

Triangulation and Contour heights are approximate.

Forest and bunds are coloured green; cultivation yellow.

Trees planted on roads, streams, canals, tanks, &c. which generally overhang water are shown in blue.

Copies of this map can be obtained from the Survey of India Offices, Writers' Building & Head Quarters, Calcutta. Price—One Rupee in addition to postage, packing and registration, amounting to One Rupee Two Annas.

Town Guide Map of Lahore City: 1920

Town Guide Map of Lahore City (opposite page)

The Walled City, during the Mughal period, was enclosed by a fortification wall having thirteen entry gates. These gates fell in the following clockwise directions: The gates on the northern side were Roshnai Gate, Masti Gate, Kashmiri Gate and Khizri or Sheranwala Gate. Those located on the eastern side were Yakki or Zaki Gate, Delhi Gate and Akbari Gate. The gates on the southern side included Mochi Gate, Shah Alami Gate, Lohari Gate, Mori Gate and Bhati Gate. Taxali Gate is the only one located on the western side.

The physical planning of the Walled City was based upon natural or organic order. The spatial organization was comprised of a *bazaar, chowk, mohalla, katra, kucha, gali, maidan, vehra and chajja*. The city gates were interconnected with each other through a principal thoroughfare. Either side of this road was lined with shops, thus forming a *bazaar*. The nature of bazaars was sometimes highly specialized depending upon the nature of items sold there. These specialized bazaars created a special flavor of the respective area in the Walled City. Some of the more well-known names included Sootar Mandi Bazaar (cotton thread), Kasera Bazaar (dealing with utensils made up of brass or iron), Suha bazaar (gold), Kanari Bazaar (glitter lace), Lakar Mandi Bazaar (wood), Moti Bazaar (pearl), Bazaar-e-Hakiman (traditional medicine), Papar Mandi Bazaar (papadams) or simply the name of the gate by which they were connected. The bazaars, besides serving their commercial purpose, also provided opportunities for social interaction. Important *sarais, hammams, tawelas*, and religious buildings (mosques, temples, and gurudwaras) were located close to them. Some of the shops such as *chai khanas* (tea stalls) would serve as meeting or chatting places for locals as well as travelers.

The meeting place or junction of two or more bazaars was known as *chowk*. These chowks were wide and spacious. The buildings enclosing such spaces or overlooking them had special design features such as *jharokas, bukarchas* or simply elaborate gateways. Sometimes an important public building located in a chowk would serve as a forecourt. These chowks most often fulfilled commercial functions. The more important chowks were Chowk Wazir Khan, Chowk Jhanda, Chowk Mati and Chowk Kotowali.

Between the bazaars lay *mohallas* or residential quarters. Each *mohalla* had its own distinct boundary defined by the bazaar. In some rare cases, boundaries of *mohallas* were not properly defined as houses of one *mohalla* were attached with the houses of another. Each *mohalla* was comprised of a homogenous population. The population was usually identified based upon the professional background or caste, the presence of an important personality or on the basis of an important landmark. The location of houses too depended upon the relative social position set by the standard of living. For instance, the level of prestige and wealth were progressively higher along a thoroughfare as it led towards the city centre. The lower and lesser ranks resided in the back lanes and marginal areas.

Katra or *katri* was a group of houses organized around a cul-de-sac or loop in a way they could be approached through a single entrance or doorway. *Katris* generally comprised 5 to 8 houses whereas a *katra* could have more than 10 houses. They were one of the important constituent elements of the urban fabric. A *katra* was generally named after the person who owned it. A *kucha* was a principal street which originated from the bazaar and led into the inner areas of a *mohalla*. A *kucha* sometimes bifurcated into two mohallas and in most cases took a winding form. They were named after the dominant activity which took place in the area such as Kucha Chabak Sawaran, and sometimes after the name of an important personality or landmark such as Kucha Pir Shirazi. In fact, sometimes, an entire mohalla was called after the name of a *Kucha*.

From *kucha* emerged *galis* or tertiary streets. These gallies provided access to the inner area of a *mohalla* and mostly culminated into dead ends (*bund galli*). The compact system of *gallis* eased movement within the area. *Galis* were not built very wide for they were needed to cope only with pedestrian and sometimes animal traffic. The high walls bounding the *gallis* provided shade. Thus, during the hottest part of the day, the *gallis* used to be cool. Because of their moderate temperature and shaded nature and because of a lack of open spaces, *gallis* also served as recreational spaces for children and as interactive spaces for women.

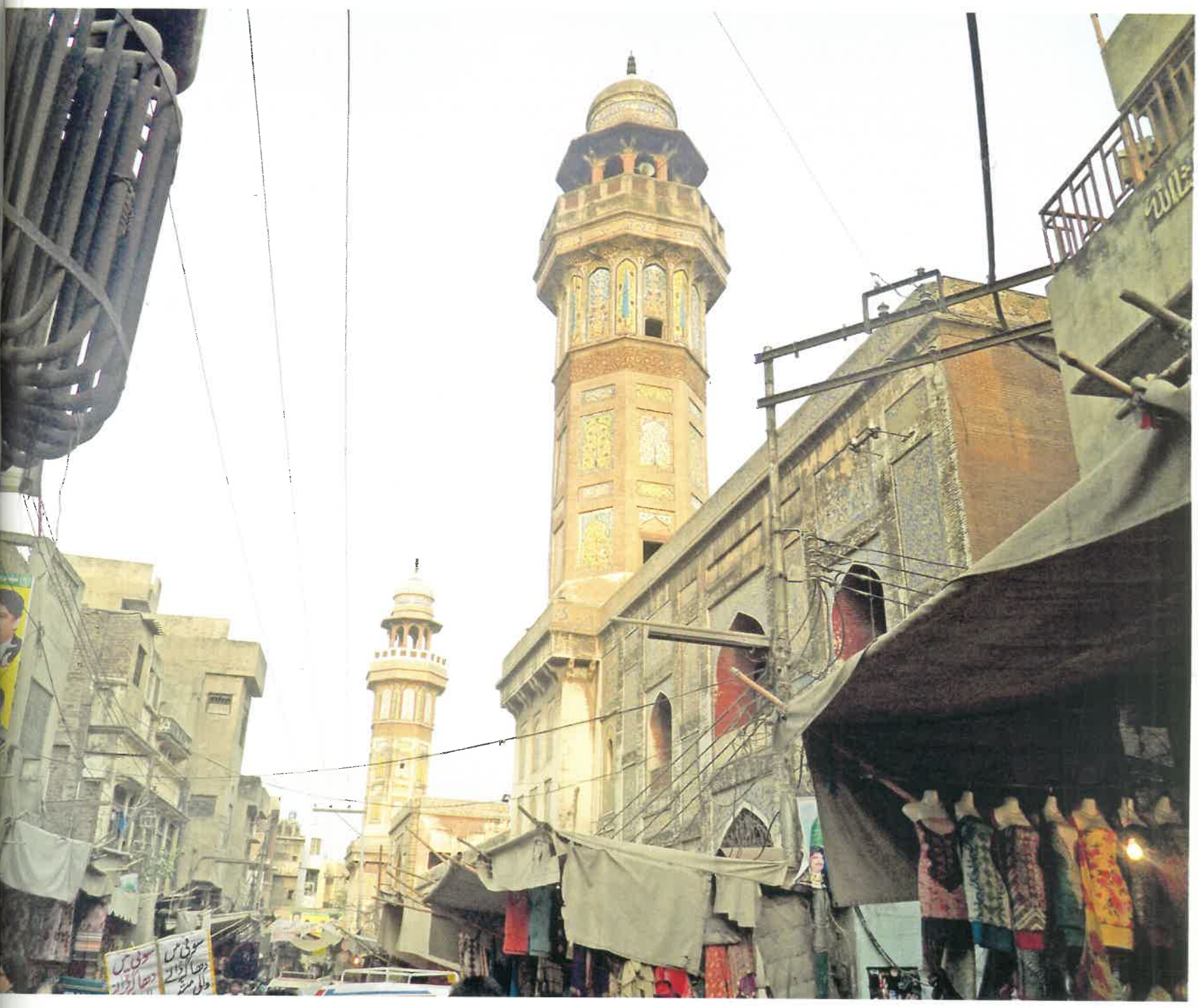
Maidan were wider urban spaces within the *mohalla*. They were enclosed by houses but could be accessed from adjoining *mohallas*. The famous *maidan* in the Walled City was Maidan

Bhaian.

A *vehra* was a semi-private area within a settlement. Gondi Vehra is one such example of this important typology.

Finally *chajja* was a structure which bridged two buildings on the first floor. The *chajjas* generally existed in places where two houses across the street belonged to a single family. The residents, especially ladies of the houses could, therefore, go from one house to another without crossing public streets. The *chajjas* not only served to break the linearity of the street but also created shade points within the street, useful against the rain and sun. The Walled City was thus a compact settlement system with streets connecting different gateways as well as residential areas with the *bazaar*.

This map of Lahore's Walled City and its immediate surroundings was published in 1920. It provides detailed information on various *mohallas* (quarters), *bazaars*, and important buildings within the city. The map gives a clear picture of the construction density of the city. Patrick Geddes visited the city in 1916 and described the old city as: "For no ordinary coldness of phrasing can express the surprise and admiration, the delight, with which one can make acquaintance with Lahore, even as a veteran tourist, long familiar with many of the great examples of Muhammedan architecture, domestic, palatial, and monumental, and these from Constantinople to Agra and Delhi, and across India from Ahmedabad to Dacca. For here is certainly one of the most picturesque of them all, with its piled up, many storied grouping, its endless variety and enrichment of details. Monuments too, of which more than one rank among the most splendid; a Processional Way, unsurpassed of its kind (Geddes, 1965:38)."



Kashmiri Bazaar near
Wazir Khan Mosque,
Lahore.

Lahore and Environs

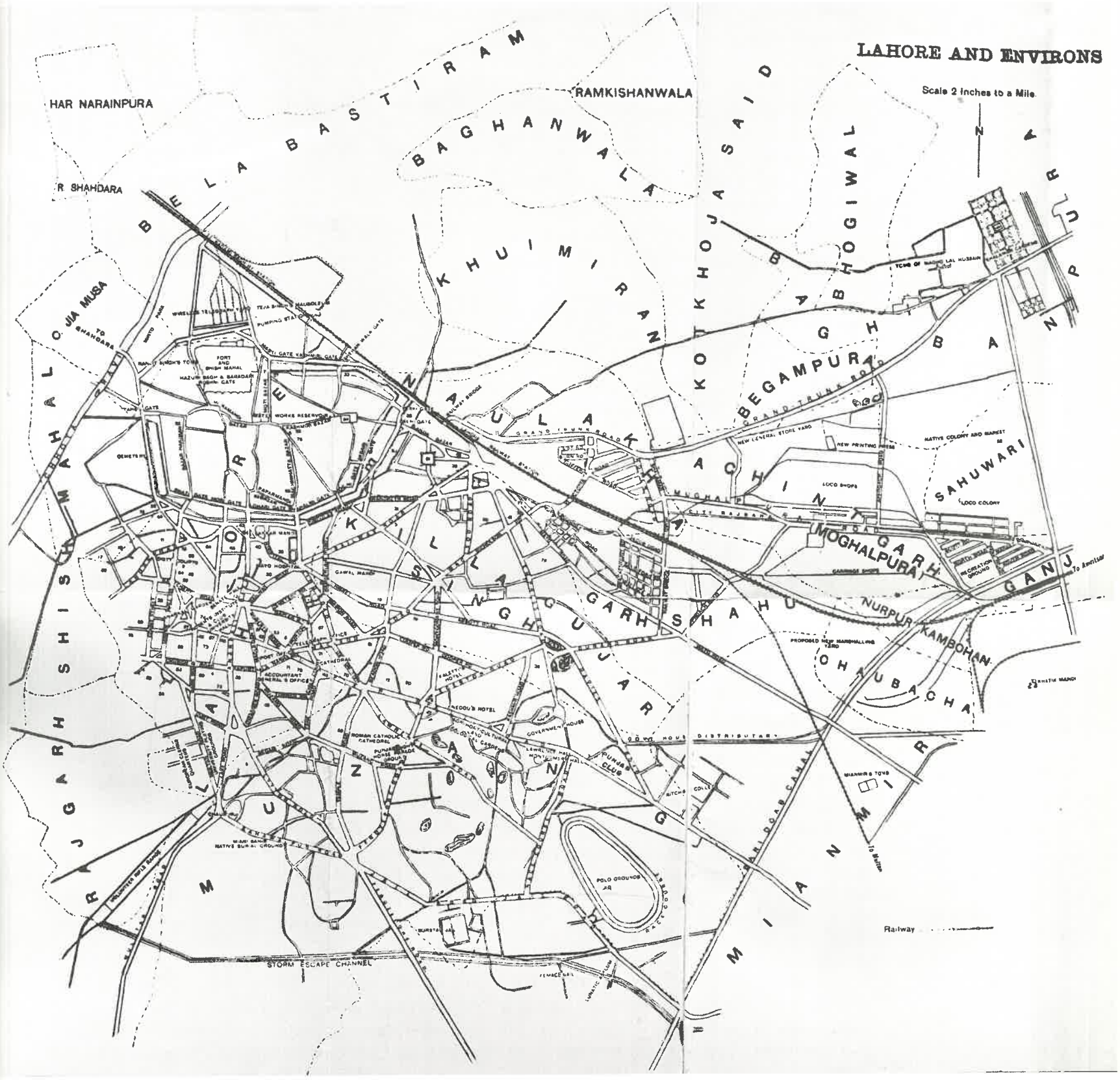
In 1921, Lt. Col. H. A. Newell published his book entitled "Lahore: (Capital of the Punjab), A guide to places of interest, with history and map." The map was extremely useful in providing information about important areas of Lahore. Some of the names of localities either disappeared or became less important. The area around Loco and Carriage shops near Mughalpura was known as Achint Garh. The British period artists who have painted the Ali Mardan Khan tomb gateway mentioned it as Gateway of Achint Garh. Similarly, the locality close to the tomb of Bahadur Khan Tomb was mentioned as Chobacha also very much existing today but not much known (Newell, 1921). Chobacha was predominantly a Sikh settlement but also had residents from the Muslim community. There was a *gurudwara* as well as a mosque. The remains of the gurudwara still exist. The settlement had a square plan with four corner towers. It was situated away from the main town, therefore, gates were provided which were shut down before nightfall. At each corner there was a *burj* or corner tower. These towers have been now vanished. The streets were winding and could be accessed by gates. The gate openings in the form of archways still exist in a number of places. This square settlement can be seen in the map of 1845.

The other important settlement included Kot Khoja Said (Kot Khawaja Said), Killa Gujar Singh, Naolakha, Mozang, Baghbanpura, Moghalpura, Sahowari, Ganj, Mian Mir, Rajgarh, Nurpur Kambohan, Khui Miran. There was Bela Basti Ram on the northern side of the town.

In his book, Newell has described the old *mohallas* and important buildings of Lahore. The source of information of the book was based upon Syed Muhammad Latif's book on Lahore. The details of individual important buildings are almost a repetition of the above mentioned source. In the introduction, Newell (1921: iii) gave the real picture of the buildings and routes leading to Lahore in the following words:

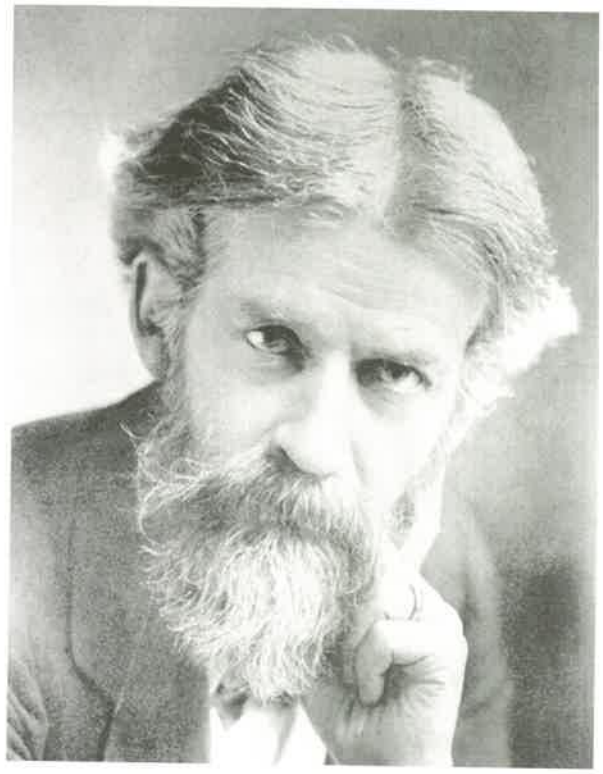
"Although Hindu Raj, Mughal Empire and Sikh rule have passed away as dream of the night, the romance of Lahore, its many tragedies and its transient glories, still cling, about the old time buildings. Each has a story to tell well worth of hearing. The past yet weaves a potent spell over ruined arch and mouldering tomb, causing the faded enamels to glow afresh and renewing the luster of the tarnished gilt. The voice of the enchanter, memory, wakes echoes of the long ago. At the sound, gardens bloom again in the wilderness. Once more fruit trees line the Badshahi ka Rasta all the way from Lahore to Agra, as did in the days when Akbar was King. Kos Minar spring up by the road side, big red brick sarai's bid the traveler enter and rest at every eight mile, and the creaking of Persian wheels along the route, tell a tale of cool, clear water waiting for thirsty lips."

By this time Lahore was one of the largest cities of India. In 1891 it was India's tenth largest city with a population of 176,854 from which it climbed steadily to 281,781 and fifth-place ranking in 1921—a ranking it retained for the rest of the colonial period.



Lahore and Environs

PATRICK GEDDES AND URBAN IMPROVEMENTS IN LAHORE



Potrait of Patrick Geddes

The image of cities and urban environments is formed from tangible and intangible forces. The socio-economic and cultural traditions, living patterns and collective behavior play an important role in defining and shaping the image and physical character of cities. Cities flourish and decline and therefore, require a periodic review of their existing condition to cope up with the demands and challenges of the time. In the beginning of the twentieth century, Lahore began to turn into an industrial city. The construction of railway workshops and growth of agriculture led to the growth of existing and emergence of new settlements. These factors put forward new challenges before architects and planners. The design and implementation of important architectural and physical planning projects were taken at hand to meet housing demand by additional workforce coming from England and neighboring regions. In addition, improvements of existing settlements were required to make them in line with the new settlements.

In this situation, Patrick Geddes came to Lahore to review existing work and to suggest improvements in the projects already being in the implementation process. As a botanist and having studied under Thomas Huxley, in 1880 he got interested in sociology and particularly in the theories of French Sociologist Frederick Le Play, dealing with culture and economy in the cultural context (Meller, 1993: 24-25). His first active interest in town planning seemed to have developed in 1886 when he and his wife moved into a slum tenement in the suburbs of Edinburgh where they not only observed the life of slum dwellers but also gave practical suggestions for the improvement of their habitat. In 1988, he was appointed Professor of Botany at the University of Andrews, Dundee. During this time, Ebenezer Howard, a British parliamentary secretary, was advocating his proposal for the "Garden Cities of Tomorrow" for a better living environment. Prof. Geddes seemed to have approved his theory but he was more interested in the upgrading and improvement of existing cities and settlements. Geddes did not give any new theory, but his wisdom touched many aspects that revolutionized many planning thoughts and paved the way for many new theories that are now being practiced.

Geddes' ideas gained great success when First Town Planning Act was passed with the common efforts made by him and John Burns M.P. In the following year (1910), his work, exhibited at the Royal Academy in London, received great accolades from general public. This exhibition travelled in many cities in the UK, and later in Ghent and Belgium from where it won an international prize (Boardman, 1978: 240-48). Geddes continued to put his efforts to the advancement of the profession particularly focusing on urban improvements. In a meeting held in London on 21st November 1913, he was one of the twenty planners instrumental in establishing the Town Planning Institute. In 1915, he published his book, Cities in Evolution, in which he narrated his ideas and concepts presented in the exhibition.

Professor Geddes conducted three trips to India, first from 1914-15 with his eldest son Alasdair, second with his wife from 1915-18 and third from 1920-24. In the last trip he served as Chair in Bombay University in the Department of Civics and Sociology. In these visits Prof. Geddes studied and presented his recommendations for almost fifty cities of British India. He later visited the United States of America where he had developed strong affiliations with Lewis Mumford, who became strongly influenced from Gedde's ideas. As Novak puts it, "Patrick Geddes was a vitalistic philosopher of catholic interest-Mumford was his pupil, friend and ultimately his successor. For Mumford, Geddes was a philosopher whose knowledge and wisdom put him on the level of Leibnitz, Aristotle or Pythagoras", a claim which deserves some serious scrutiny. Patrick Geddes' ideas

about urban life profoundly influenced Mumford's own ideas (Novak, 1995: 85). Volker has made an in-depth comparison between platonic and Geddes theory (Volker 2002: 116-17).

Geddes' philosophy "Survey before Plan" and "Diagnosis before Treatment" were widely acclaimed. He stressed the importance of survey (physical documentation) for master planning. In his own words, "plan would have been widely different with fuller knowledge" (Geddes, 1949: 125) and "once produced, it will be too late to replace, and even difficult to modify." The documentation was in the form of maps, drawings, statistics, and town condition (including open spaces, infrastructure etc.) and requirements. The surveys are primarily required to know the spatial growth, socio cultural traditions, communication routes, population, industry and commerce. He expressed its importance as "the whole situation and life of a community in the past and present, and thus, preparing for the planning scheme which is to forecast, indeed largely decide, its material future." The collection of data was the first step towards knowing the existing situation. According to Geddes, the assignment was incomplete until that information was not exhibited for public review in order to "ventilate it as far as may be in public opinion and through the press (Geddes, 1949: 126)." The data would be collected for a given situation as well as for a "larger surrounding region (Geddes, 1949: 129)."

Geddes has expressed the different stages of a city in the following words: The Paleotechnic era is the first crude period of the Industrial Age, which has produced a state of Kakotopia (bad place), *i.e.,* of slums, semi slums and superslums. The Neotechnic era is the second, dawning period of Industrial Age which may produce Eutopia (good place), *i.e.,* the realized version of Utopia (nowhere); a place of effective health and well being, of glorious and unprecedented beauty (Geddes, 1949: 23-32).

Geddes' always believed in conservative surgery instead of any aggressive approach. As he said, "In every city there is much of beauty and more of possibility; and thus for the town planner as an artist, the very worst of cities may be the best (Geddes, 1949: 137)." Explaining this concept further, he said, "We have to keep in view the spirit and individuality of our city, and to enhance and express this if we do not further efface or repress it." Cities required change and improvements with the passage of time but any change must retain the "character and spirit of the city (Geddes, 1949: 139)." Every city has its own architectural and urban design qualities which make them unique compared with other cities. Even within one geographical region, there might be a different land use concept, architectural detailing, history, or even the street culture based upon economy or collective behavior which makes distinct personality of each place. Therefore, these aspects would be kept in mind while preparing any master plan. In this way the problem of "social pathology" that leads towards "social hygiene" could be handled (Geddes, 1949: 138).

By summing up the objectives of these efforts, Geddes believed that "past is not only fruit but seed, and so prepares for a coming spring, a future harvest (Geddes, 1949:143)." All such efforts must be made to renew the link between the associations of the past and present in order to "commemorating the past and dignifying the present (Geddes, 1949:144)." This is the real economics and benefit of urban development. With this background and concepts Professor Geddes arrived in Lahore from Lucknow. He started his work by surveying the old part of the city. Even after spending fifteen days in this area he found this time insufficient to know the entire old Lahore but at the same time he was impressed with the beauty of the city.

After conducting thorough city surveys in Lahore, Geddes displayed all sorts of information collected from the field on the walls of Municipal Council to get feedback from the general public before making any proposal. According to him, all disputes could be settled as they arise and in this way completeness, workmanship and accuracy of the plan could be improved (Geddes, 1965:2). Unfortunately all this documentation was lost. In the presentation of such data, he recommended that one subject would be dealt with a separate plan. Diseases, for example tuberculosis and its patients returning from each area, would be marked on another plan so that the public health committee would give his recommendation including provision of open areas in congested quarters (Geddes, 1965: 3). Similarly religious topography of Lahore, such as temples, mosques, tombs and professional ways would be marked on another plan.

In Lahore, he examined the master plans for existing settlements and gave proposals for the development of open areas in the southern and eastern sides of the town. He wanted to see the harmony between the city and the country in order to "return to nature (Volker, 2002: 139)."

In dealing with the development of existing settlements, he was primarily concerned with the proper utilization of open spaces; however, a smaller area could be claimed by trees. He also gave priority to the less privileged class. This is especially evident in the proposal he made for Qila Gujar Singh. He was against large scale demolition. His ground rule for development and eviction was that "these must in any and every case be deprecated until or unless a new and adequate location is provided (Geddes, 1965:20)."

Geddes' approach to master planning could further be understood with his examination of the proposed redevelopment project of Changar Mohalla located adjacent to Landa Bazaar and Mohalla Dara Shikoh. The first thing he observed in that survey and proposal was that it was all confused. The drawing showing the proposal must contain requirements of the projects, summary of costs, summary of additional proposed additional expenditure, length of roads and cost of construction. This information provided quick understanding of the proposed redevelopment scheme. The scheme, as he observed, was of drastic and sweeping nature (Geddes, 1965:5). All buildings including two temples, five mosques and two *dharamsalas* were swept away except the police station. In this way, three faiths were outraged gratuitously. The shops of Landa Bazaar, houses and roads were pulled down without any reason.

The concept of the proposed scheme was based on "byelaws method" prevailed in England which according to Geddes had become obsolete since 1910 (Geddes, 1965: 5-6). The scheme was alien and destroyed all human values and associations, both sacred and profane. He, therefore, recommended making thorough analysis of each property and then deciding accordingly. He stressed respecting local conditions and values at all cost. Geddes was of the view that local roads and lanes were the past product of practical life and therefore need to be improved. He believed that public convenience and safety should also be given due consideration. Geddes advocated moderate planning and careful selection of trees; so that, even without the expense of continuous avenues, verdure could be seen from almost every important point. He proposed providing inexpensive moderate open spaces in which children could play and their elders could have a breath of fresh air. The layout on the basis of byelaw planning (regular size of plots) would be avoided.

In his proposed plan, Geddes provided all plot sizes to accommodate a wide range of income groups. He specially provided a better environment to poorer sections of society. New shops were provided on Mayo Road and the central lane was widened to provide access to back lanes by demolishing the *katcha* houses. All the sacred structures were retained and existing population accommodated. In this connection, he narrated his experience of Lucknow in the following words: "We never now reject any person from his house or holdings, however small or however poor, objectionable nor insanitary even, we first assuring ourselves that he has either found a suitable new place for himself, or we have found one for him, this is why our improvements are going so easily. We have now got the people with us."

Geddes was not much in favor of straight streets laid mechanically. According to him, the existing roads and lanes were the past product of practical life and therefore, be improved. He proposed leaving ample spaces at street entrances and their crossings for public convenience and safety. He stressed the need for a more realistic plan based upon the existing features. In every proposal, existing pathways and landscape features such as wells, gardens, trees etc., were respected. This added to the beauty of the landscape and broke the monotony of the rigid layout of rectilinear roads. He was very much concerned with provision of open spaces and width of the streets for ventilation. According to him, a 40-foot street was adequate and a 20-foot street was too wide narrow. By projecting 3 to 4 feet balconies from either side, proper ventilation in a 30-foot street could not be ensured. As regards Circular Road, Geddes visualized it as a great boulevard.

Regarding Mozang, Geddes made two important observations. The first was conservation and restoration of Rai Mela Ram tank located at the junction of present Fatima Jinnah Road and Waris Road as it will add additional charm to the existing small garden (Geddes, 1965:24). Secondly, he stressed the need for plantation of palm trees in the graveyards in a systematic manner. He had cited the example of Turkey where such trees were planted in such places.

About the extension of Mozang and neighborhoods of Takia Imliwala, Geddes proposed "economic surveys" of the area to know the professions of the residents in order to address their

actual space requirement. Shopkeepers, artisans and weavers require different kinds of spaces than cattle keepers (Geddes, 1965:25). Similarly, professors and economists may be accommodated close to their work place (Geddes, 1965:23). Such surveys helped design settlements closer to the aspiration of the people. Two types of housing were clearly identified on the basis of nature of work. The hand workers had poor and congested houses while the brain workers had nice and spacious housing. The railway accommodation, which was initially occupied by brain workers, was gradually transformed into hand workers (Geddes, 1965:26).

While discussing the master plan of Gwalmandi, Geddes felt the need for Building Courts where decisions made by engineers or any other officials, or wrong actions of any individual could be challenged (Geddes, 1965:14). Improvements were thus ensured; although the procedure caused some trouble for architects and builders, and the public also (Geddes, 1965:14). Geddes believed that people would soon appreciate such strictness, and would give little sympathy to individuals who felt disappointed (Geddes, 1965:14). Indeed the vast majority of those whose plans were sent back for correction or improvement had to be grateful for thus receiving skilled advice gratis.

The importance and plantation of trees had been stressed. Therefore, according to his plan, the minimum width of the streets was not less than 40 feet so that trees could be planted to achieve better physical environment (Geddes, 1965:13). The importance of avenues was also highlighted and recommended that fruit trees would also be planted along such avenues. He recommended the plantation of oranges, pomegranate and strawberries along the avenues (Geddes, 1965:47). According to him, avenue trees should be chosen for fruit and use, not merely for beauty. Jaman trees were planted along Canal Bank Road from Gulberg Road to Mayo Road intersections.

Geddes visited the suburban area east of the Walled City for possible extension. The area along Grand Trunk Road had numerous gardens which once adorned this district. With these garden suburbs, this great city was traditionally seven times larger than the present one. Unauthorized construction of industry of hides and tanning began to grow. He suggested the establishment of a tanners' village in which work could be done more efficiently and economically than at present (Geddes, 1965: 36).

Geddes also found future housing projects on the southern side of Lahore adjacent to the great storm water channel near Nawankot or Garden village. According to him, when included in the city boundary, this village would be expected to grow much more rapidly than ever before. West of Multan Road, up to its junction with Lake Road, considerable vacant space existed; and northward of this also, as far as City plan extends, the whole district called for study and extension (Geddes, 1965:32). Poonch Road and Samanabad Schemes were later developed on this area following Geddes' philosophy.

Geddes also appreciated the large scale relief model preserved in the verandah of Town Hall. The model highlighted a network of roads threading their way through the gigantic brick rubbish mound, leveled down at the time of the layout of roads. He suggested preserving the model and placing it in a future civic museum that would enhance civic awareness and help better understand the city. He felt the need for improvement of important road junctions. In his opinion, the engineer practically left intersection points undersigned which, therefore, remained an important source of accidents. He was practically concerned with the improvement of "Star Crossings" of more than four roads. He identified several critical crossings needing improvements. Three of them were extremely critical for which he gave his recommendations. The first intersection identified was located south of Mozang (intersection of Ferozepur Road, Temple Road, Jail Road, Bahawalpur Road and Lytton Road), the second was a segment of the road between Mclagon Road and Lahore Museum and the last junction facing the railway station.

In short, Gaddes had a very practical and realistic approach to the involvement and participation of the residents in the design process to achieve a meaningful built environment. He admired the beauty of the Walled City but was very much disappointed to see the overhead cables which were destroying the image of this excellent city to which the local engineers had no answer. His philosophy was based on the concept of conservation of existing resources and improvement of the built environment by bringing nature into it. The concept of ecourbanism was well appreciated and founded its grounds in the city of Lahore.

Shah Almi Gate
Bathing ghat
CIRCULAR ROAD
Canal Northern
Backing ghat
Mosque
Tonga stand
Tonga stand
TANK
RATAN CHAND ROAD
Mosque
Graves
Kacha
A V GIRL SCHOOL
HOSPITAL ROAD
RAILWAY ROAD
MAYO HOSPITAL
NISBET ROAD
BHARAT BUILDINGS
RATAN CHAND ROAD

CANAL DISTRIBUTARY
CIRCULAR ROAD
CHAMBERLAIN ROAD
CHAMBERLAIN ROAD
W. BARKAT ALI TAZIA ROAD
RAILWAY ROAD
GWAL MANDI ROAD
GWAL MANDI BAZAR
Tube well
Mosque
Kucha
Kucha

Lahore Sewerage: Central Plan 1922

Front Cover of letter to the Presedent Municipal Committee Lahore (1876)

On June 13th, 1876, Captain R. P. Nisbet, President Municipal Committee Lahore vide letter (No. 237/N) addressed to Commissioner and Superintendent Lahore Division submitted resolutions passed by the Municipal Committee Lahore at a special general meeting held on 31st May 1876. These resolutions conveyed the intention of the municipality to undertake, subject to the necessary sanction of the Government, the erection of the water works so as to ensure a pure water supply to the city of Lahore and its suburbs, including the main bazaars of the large civil station of Anarkali, and the construction of an improved and complete drainage and sewerage system for the same localities. The municipality applied to the government for a loan and necessary funds. The annexure to this letter consisted of complete reports and estimates for both the water and sewerage projects prepared for the municipality by Engineer Leslie Clark, C.E who was known for his excellent work in other large cities of India. He also appended an application from the Municipal Committee for a loan to carry out the work and a valuable report on their financial position by Mr. Jazeb Lightfoot, Auditor of the Sindh, Punjab and Delhi Railway Company, showing that the committee is fully justified in asking for a loan to do the work proposed. The report was supported by two separate water supply and sewerage maps.

LETTER

FROM THE

PRESIDENT MUNICIPAL COMMITTEE

LAHORE

TO

THE COMMISSIONER AND SUPERINTENDENT

LAHORE DIVISION

ON THE SUBJECT OF

Water-supply and Drainage of Lahore.

June 13th 1876.

Plan of the Lahore City and Suburbs accompanying Drainage Report 1876

Lahore Sewerage; Central Plan 1922 (opposite page)

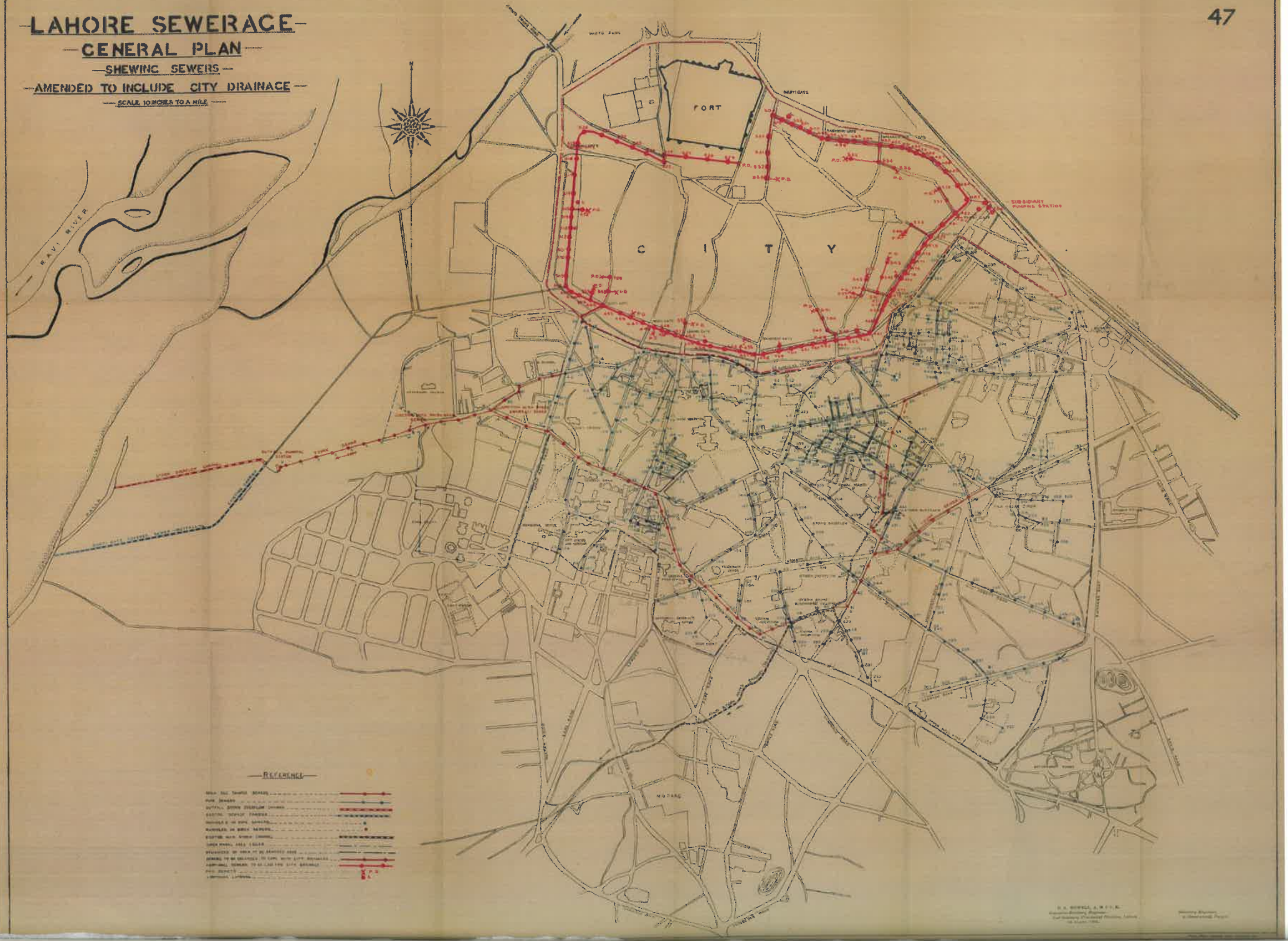
LAHORE SEWERAGE

GENERAL PLAN

SHEWING SEWERS

AMENDED TO INCLUDE CITY DRAINAGE

SCALE 10 INCHES TO A MILE



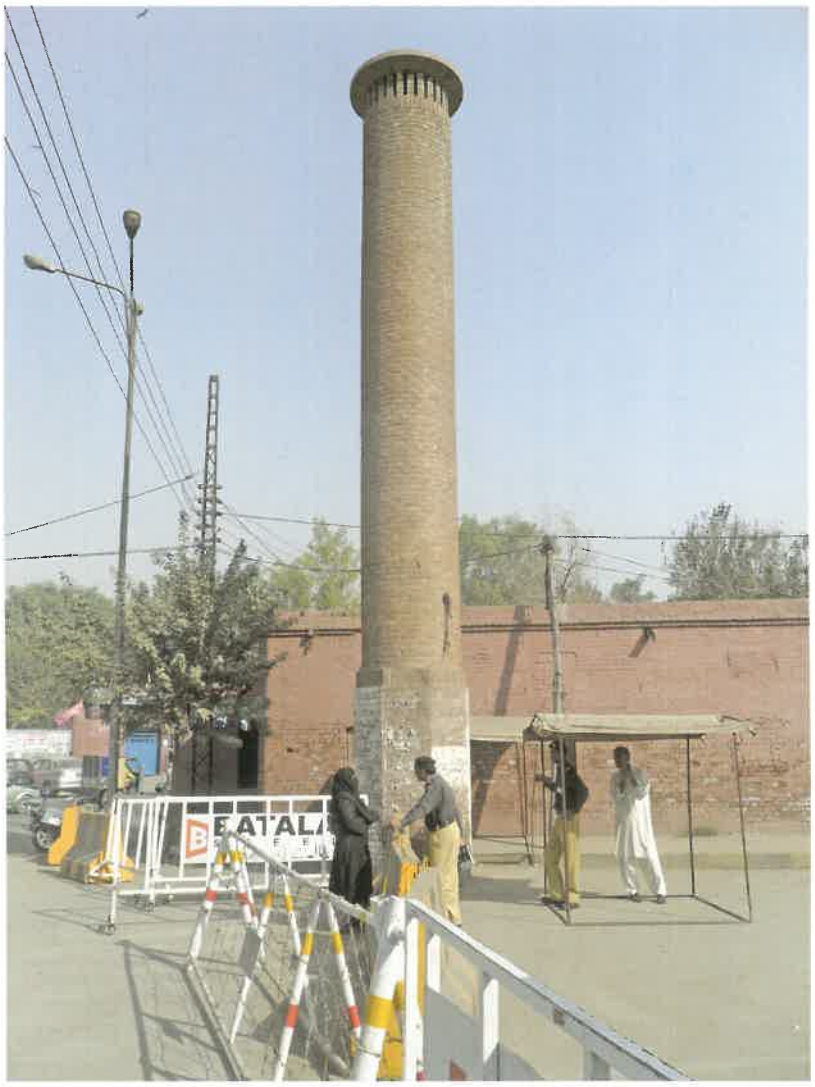
The main argument put forward for the construction of a new system to carry off the liquid sewerage and storm water was that the existing system of drains was laid down very cheaply soon after annexation in 1852. In a letter dated April 17, 1875, Mr. Clark wrote that except for few larger streets there may be said to be no drains at all and certainly no system of drainage. Therefore, complete sanitary reforms were required to improve the environmental condition of the capital of this important province. He further stated that an outfall sewer would be required to carry off the sewerage of Lahore which was then falling into what was known as the back channel of the Ravi and so into the river itself. The sewerage fell into the channel at a rate of two cubic feet a minute forming an enormous cesspool below the walls of the fort with its European garrison and behind it a city with 1,30,000 inhabitants. Due to the construction of the railway bridge by the engineers of Northern State Railway, dams had been constructed across the river at its northern end, which had stopped the flow of water from the river, and with other training works silted up the mouth of the channel. This drainage pattern was a source of nuisance for the local residents as well as engineers working on the bridge. If this arrangement had continued, it would have had drastic effects on the availability of clean water. It was, therefore, proposed that the outfall sewer be carried some five miles to a point near village Sanda and there be allowed to discharge into the River Ravi. It was specifically mentioned that beyond this point the people of Lahore should not consume water for drinking purpose.

Plan of Lahore City and Environs accompanying Water Supply Report 1876

With this background the British engineers laid out a sewerage system both inside and outside the Walled City. This sewerage map of Lahore covered an area from Mayo Road up to Railway Headquarters in the east, newly developed Krishan Nagar in the west, Lahore Fort in the north

and junction of Ferozepur Road and Bahawalpur Road including Mozang in the south. The map was signed by D. A. Howell, Executive Sanitary Engineer, 2nd Sanitary Provincial Division, Lahore.

The map shows the following information: Brick Egg shaped sewer, pipe sewers, outfall, storm overflow channel, existing sewage carrier, existing main storm water channel. It provides information regarding both trunk sewer, local collectors and the storm water channel. The map also shows the location of pail depots and public latrines. Most of the public latrines are located on Circular Road. In addition, the proposed sewers to be enlarged to cope with the city requirements, and additional sewers to be laid for the city drainage are also mentioned. Minute details such as location of manholes both on the pipe sewer as well as brick sewers are also indicated on the plan. It is interesting to note that chimneys were constructed in fair-face brick masonry over the sewer for the discharge of gases. These chimneys, today act as important visual features in the streetscape.



Chimney over trunk sewer near Civil Lines Police Station

North Western Railway Lahore Sewerage and Drawage Sheet No. 28 & 29 (page overleaf)

New schemes were initiated to bring all areas and large schemes into the main sewerage network. Subsequently sewerage and drainage schemes were also prepared and commenced for the suburban settlements. In 1926-27, the Ichhra drainage scheme, with an outlay of Rs. 9492, was commenced. The scheme consisted of disposal tanks with Persian wheels and a main outfall drain.

SHEET 28

NORTH WESTERN RAILWAY LAHORE
SEWERAGE AND DRAINAGE

NOTE.
LINES OF SEWERS SHEWN THUS
LINES OF STORM WATER CHANNELS SHEWN THUS

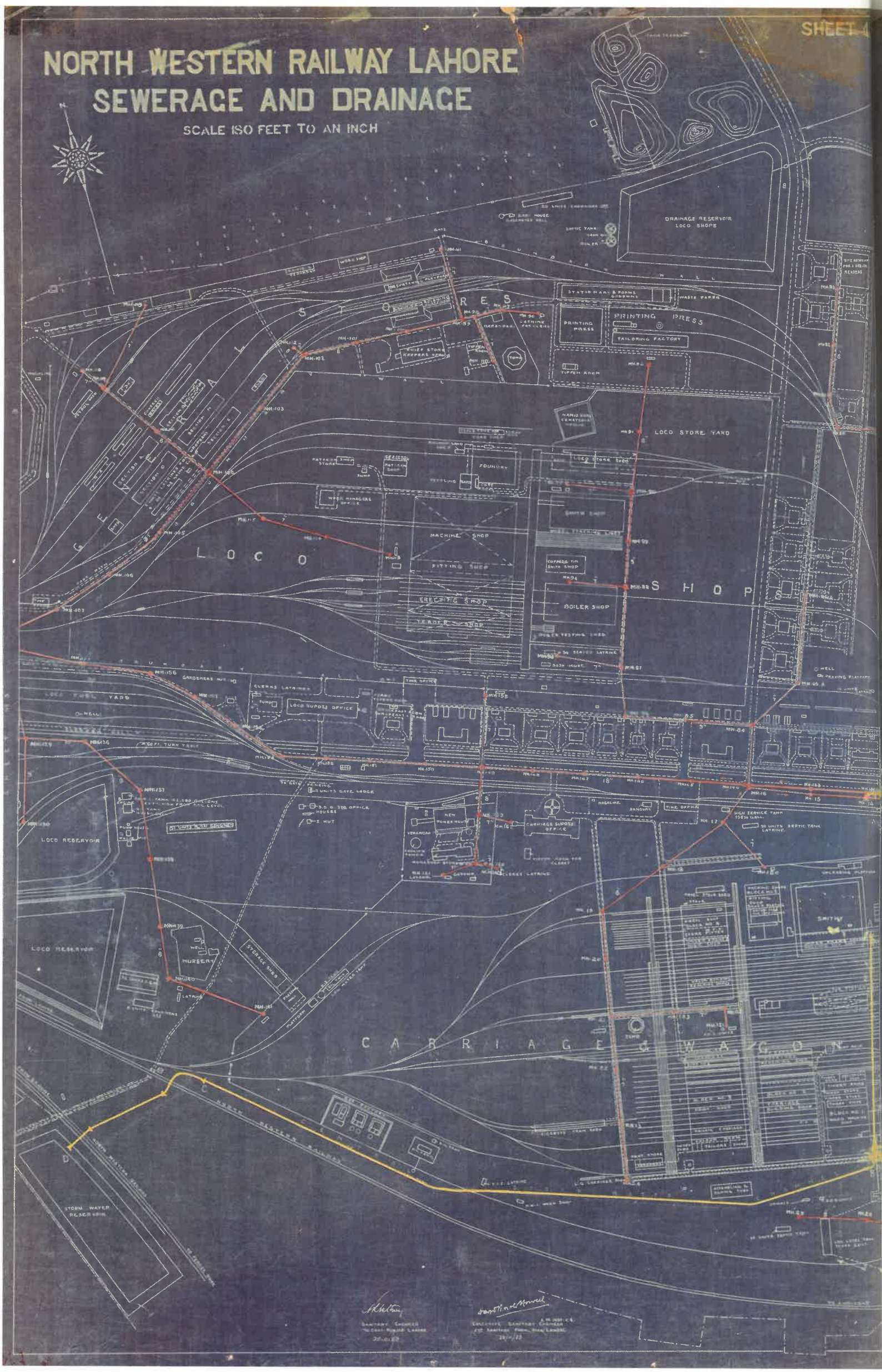
SANITARY ENGINEER
TO GOVT. PUNJAB LAHORE

NORTH WESTERN RAILWAY LAHORE
SEWERAGE AND DRAINAGE
SHEET 29
NEW RAILWAY HOSPITAL
LATRINE
ISOLATION WARD FOR INDIANS
OUTWARDS GOODS YARD
NURSERY
VILLAGE
QUARTERS
RY. SCHOOL
PLAY GROUND
CO. OPERATIVE STORE
N.W.R. BOUNDARY
GRAND TRUNK ROAD
CHRISTIAN GRAVE YARD
BURIAL GROUND
INCINERATOR
GARDEN
HINDUS TEMPLE
INDIAN DRIVERS QRS
LOCO MENIALS QRS
24 UNITS
RESERVOIR
FOUNDRY
STORE
CONTRACTORS
SIGNAL YARD
BLOCK A
BLOCK B
BLOCK C
BLOCK D
REST HOUSE FOR OFFICE
GARDEN
INDIAN CRICKET GROUND
AREA = 4.08 ACRES
LOCO M QRS
EUROPEAN RECREATION GROUND
AREA = 9.75 ACRES
PAVILION
BURT THEATRE
INSTITUTE
RECORD ROOM
BUNGALOW
GRAVE YARD
STRANGERS HOME
SHED STORE
OLD POWER HOUSE
OFFICE
DRINKING WATER BALANCING RESERVOIR
SHED OVER BOILER
SWEEPERS HUT
50 TURN TABLE
ENGINE SHED
RESERVOIR
WASTE WATER RESERVOIR
INDIAN DRIVERS QRS
40 UNITS
ROAD
GARHI SHAHOO VILLAGE
FENCING
PRIVATE BUILDING
MH 203
MH 204
MH 392
MH 222
MH 215
MH 290
MH 253
MH 254
MH 251
MH 252
MH 260
MH 261
MH 262
MH 263
MH 124
MH 125
MH 126
MH 135
MH 236
MH 237
MH 238
MH 239
MH 240
Sanitary Engineer
To Gov't Punjab Lahore
D/- 26.1.24
Executive Sanitary Engineer
2nd. Sanitary Provl. Division Lahore
D/- /24

NORTH WESTERN RAILWAY LAHORE
SEWERAGE AND DRAINAGE

SCALE 150 FEET TO AN INCH

SHEET 4



SHEET 5

NORTH WESTERN RAILWAY LAHORE
SEWERAGE AND DRAINAGE

SCALE 150 FEET TO AN INCH

N.

VILLAGE DAIRS

THIS AREA RESERVED AS A BUFFER BETWEEN EUROPEAN AND INDIAN STAFF QUARTERS

FUTURE EXTENSION FOR RECHARGE BUNGALOWS

RECREATION GROUND
AREA 14.52 ACRES

SHOPS

MUD WALL

NORTH WESTERN RAILWAY

CANTONMENT

VEGETABLE GARDEN

CATTLE SHED

WIRE FENCING

LATRINE

SANITARY ENGINEER
TO GOVERNMENT PUNJAB

EXECUTIVE SANITARY ENGINEER
2ND SANITARY CIRCL LAHORE

Lahore Guide Map: 1925

This map is an updated version of the 1921 map and provides some useful information regarding land-use in Lahore. By now, south and southeast of the Walled City had become fully developed but at the same time distribution of open areas remained fairly uniform throughout the city. Areas in the north and northeast of the Walled City (north of Grand Trunk Road), the south of Central Jail, the east of Race Course Road and the west of Veterinary College still remained dominantly agricultural. By this time the Improvement Trust Act IV of 1922 had been in place. The aim of the act was to make provisions for the improvement of certain areas and expansion of towns. The trust was authorized to prepare housing schemes within the municipal limits of Lahore.

The Mall, Government Officers' Residence, Mayo Garden and Cantonment had largely been developed. The schemes still maintained large open spaces all around them. On the other hand, Donald Town had grown into an important residential area of the ruling and elite class and the road network of Model Town had started to show its appearance.

The map clearly shows the suburban villages and agricultural areas all around the city of Lahore. An important feature of the plan is the water system associated with the Bari Doab Canal. The lawns and open grounds of G.O.R., Mayo Garden, Race Course, Governor's House, and Cantonment were irrigated with the help of water courses drawn from upper Bari Doaab Canal. (Rehman, 2009: 53-64). In his report of 1924-25, Basil M. Sullivan wrote that streets of G.O.R had been laid out, trees planted and channels brought from the canal (Government of the Punjab, Public Works Department, 1924-25:6-8). The canal also helped to recharge ground water. Later, a large garden, Jallo Park, was constructed on the eastern side of the city which was largely irrigated by the canal water. Governor's House and Lawrence Gardens were irrigated with a water channel drawn from the canal near Dharampura, Model Town was irrigated from the channel near Ichhra and Cantonment was irrigated with Khura channel derived from the canal near Harbanspura.

One of the most important features of the British period was the way of handling the design of large projects such as G.O.R, Charing Cross or Albert Victor Scheme (Nila Gumbad). In these projects, the consulting architect not only proposed the overall layout but also designed individual buildings. It is interesting that a government department would design buildings for private clients so as to achieve a meaningful built environment - an environment where quality of space matters and where a visitor engages in dialogue with it. The outcome thus is a strong sense of space with strong unity in the design of all buildings.

The map also for the first time shows important ponds around urban settlements. These water bodies which existed around the city could also be found north and south of Loco Workshops and Nawan Kot. Since, during this time, construction activity was in full swing, a large number of brick kilns used to exist all around the town particularly south of Ichhra and areas around Baghbanpura.

A network of link canals was laid out by the Britishers soon after the occupation of Punjab. These canals created serious problems including water logging and the behavior of water under different conditions of flow and so forth. Therefore, a new building of the Hydraulic Research Laboratory was built. The King Edward Medical College, designed by Mr. Breslauer, was practically complete in 1916 (Government of the Punjab, Public Works Department, 1916: 6). The Law College of the Punjab University was designed by Mr. G. E. Francis, Assistant Consulting Architect. The first phase of the project was opened on 9th December 1922 (Government of the Punjab, Public Works Department: 1924: 13). In addition, the designing of the Maternity Hospital (Lady Wallington Hospital) also commenced in 1924-25.

Patiala Block King Edward Medical College, Lahore

In 1924, Lahore Improvement Trust Committee was formed to collect information relating to town improvement, with a view to suggesting lines on which the trust must work. The most important work was the preparation of accurate survey maps of Lahore, which was started immediately by the Survey Department of Government of India. These maps were published in 1926 and discussed in the following pages.

Plan of GOR, Race Cource and Lawrence garden

Lahore Guide Map 1925 (page overleaf)

LAHORE GUIDE MAP

Second (Revised) Edition.

Seasons 1889-90, 1919-20, 1924-25.

Mean Magnetic Declination 2 0 East (in 1927).
Decreasing by 4 annually.

Scale 1/20000 or 3.16 Inches to a Mile

1927.

REFERENCES.

No.	Name.	Square Number.
1	Abdulla Buildings	B a
2	Ashilla Street	E f
3	Assistant Mission Church	C a
4	Auction Street	E e
5	Asst. Surgeon's quarters	E d
6	Bank Road	A f
7	Bareilly Street	E f
8	Bardoo Road	B d
9	Begum Road	AB d
10	Begum Shahi Masjid	B b

No.	Name.	Square Number.
11	Bharat Buildings	B a
12	Bilmer Street	E f
13	Boarding house (Govt. College)	A e
14	Burns Road	C a
15	Calcutta Street	E g
16	Cemetery	C a
17	Central Bank of India	B c
18	Chatterjee Road	A c
19	Church Road	A e
20	Club Road	B e

No.	Name.	Square Number.
21	Cotton factory	A b
22	Cotton mill & ice factory	B b
23	Court Road	A d
24	Delhi Street	E g
25	Dharmshala Road	E f
26	D.A.V. High School	A c
27	D.I.R. office	B d
28	D.P.I. office	A c
29	Dispensary College	B c
30	Faridkot Road	AB d

No.	Name.	Square Number.
31	Finney Road	C a
32	Goulding Road	B d
33	Govt. Normal School	A d
34	Gujrat Street	E g
35	Gulab Singh's Printing press	A c
36	Hallow Road	C a
37	Holy Trinity Church	B c
38	Jacob Road	C a
39	Jodhan Street	E f
40	Jullundur Street	E f

No.	Name.	Square Number.
41	Kachahri, Lala Mela Ram	A c
42	Kashmir Road	C d
43	Lahore Road	A c
44	Lahore Street	EF de
45	Lari Road	C c
46	Lees Stores	D e
47	Lodge Road	A d
48	Lord Lawrence Statue	B d
49	Lucknow Street	E f
50	Ludhiana Street	E f

No.	Name.	Square Number.
51	Macleagan Road	B c
52	Married men's barracks	E c
53	Masonic Lodge	B d
54	Masons Road	B d
55	Mela Ram Tank	C c
56	Mission Road	B c
57	Mohan Lal Road	AB c
58	Moghalpura Store	D e
59	Muraldhar Street	E f
60	Museum Road	A c

No.	Name	Square Number.
1	N.W.R. Dispensary	D c
2	N.W.R. Girls School	C c
3	N.W.R. office	E d
4	Office of Arbiter-el-armi	A b
5	Oil & cotton mill	E b
6	Oriental College	B d
7	Pani Mahal Road	E d
8	Patiala Rest House	B f
9	Patiala Street	E f
10	Pemberton Road	C c

No.	Name.	Square Number.
71	Police Inspector's quarters	E e
72	Postal Stock depôt	A e
73	Prayer room	E e
74	Printing press	E e
75	Pumping house	A d
76	Railway Road	B d
77	Rifle Sahib Shooting gallery & house	B d
78	Ratan Chand Tank	B e
79	Sarajpur Road	A e
80	Sewaraj Street	E e

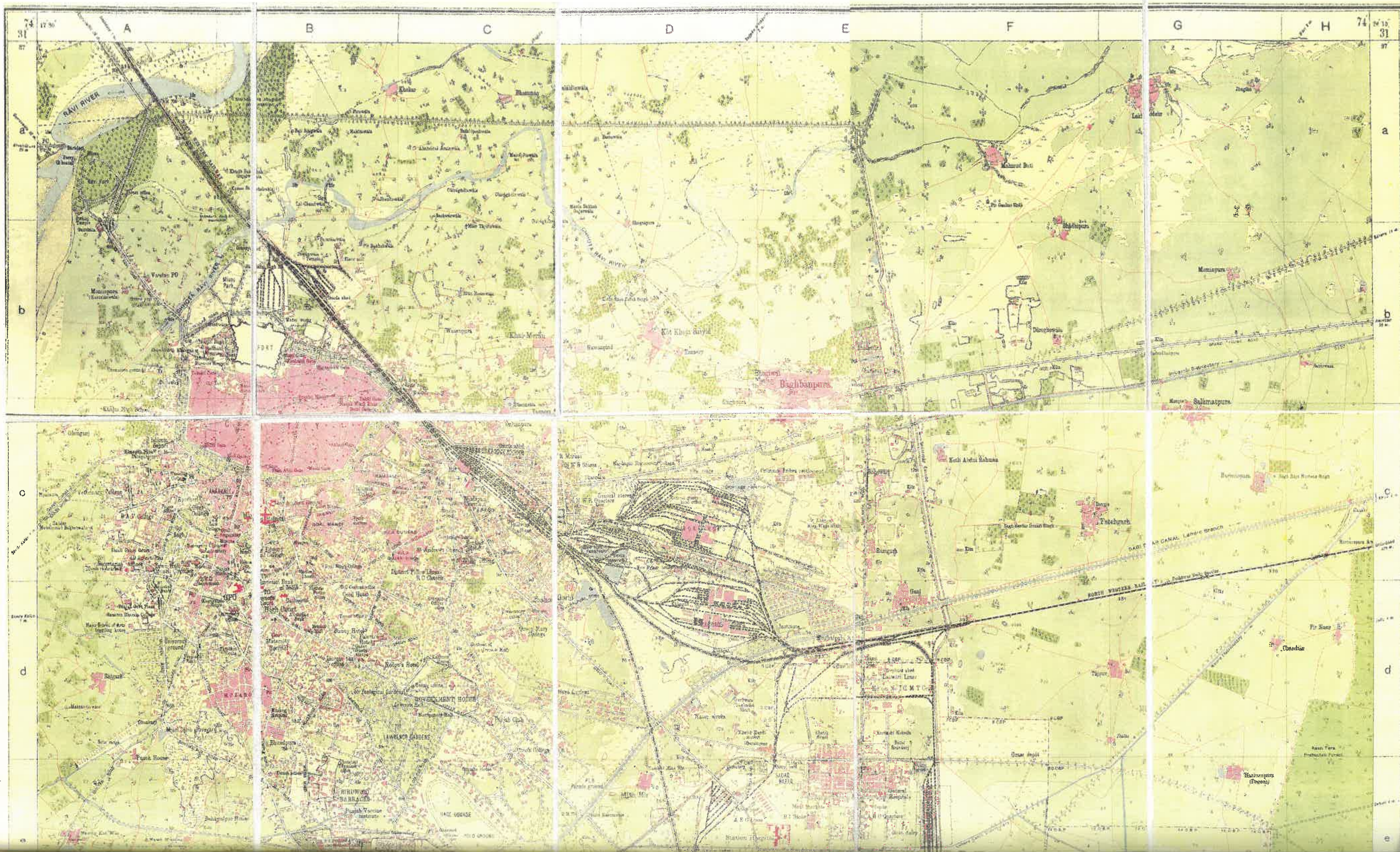
No.	Name.	Square Number.
81	Barracks [illegible] (E.I. College)	A ef
82	Robert S[illegible] road	B e
83	R.C. Ch[illegible] urch	B e
84	St Jose[illegible]'s Church	B e
85	Sarki A[illegible] dare Khan	C e
86	Sarki M[illegible] hammad Shafi	B e
87	Sarki Ra[illegible] ees Chand	B e
88	Sarki Sa[illegible] dan	C e
89	School E[illegible] ond	C e
90	Simla Ga[illegible] ent	D e

No.	Name.	Square Number.
91	Single men's barracks	E e
92	Sir Charles Napier Memorial	E f
93	Sirdesh Ranjit Singh	B e
94	Station Road	C e
95	Temple of Chhajju Bhagat	B c
96	Victoria Road	B c
97	Volunteer Club	C a
98	Wagon & carriage repair office	D e
99	Wallace Road	C c
100	Women's Industrial School	E f

1st edition 1911.
Revised edition (considerable changes) 2nd. 1927.

Second edition prepared under the direction of Colonel Commandant E. A. Tandy, R.E., Surveyor General of India

Reproduction of this map can be obtained from the Map Records & Stock Depôt, 13 Wood Street, Calcutta. Price Annas Rupees Eight Annas per copy.


RAVI RIVER
Kot Khoja Saiyid
Baghbanpura
Salamatpura
Mominpura
Fatehgarh
Mahmud Buti
NORTH WESTERN RAILWAY
BARI DOAB CANAL Lahore Branch
FORT
GOVERNMENT HOUSE
LAWRENCE GARDENS

Lahore and Environs (1926): Survey Sheet No. 1

In 1919, the Lahore Civil Station Improvement Committee was inaugurated and it was pointed out that not much could be done because the existing maps of Lahore were inaccurate and out-of-date. The Lahore Municipal Committee bore the cost of production of fresh survey maps by the Government of India Survey Department. They were first published in 1927. These maps were prepared under the supervision of Basil. M. Sullivan, Consulting Architect to Government of Punjab, and Secretary Lahore Municipal Committee.

The plan covers a vast open area on both sides of the River Ravi dotted with numerous gardens and shrines. It shows the Ravi Railway Bridge and Road Traffic Bridge on the northern side. The Baradari, Dharamsala Jawala Singh and Sardar Mela Ram Garden across the River Ravi are important features of landscape on the northwestern side. On the extreme northwestern end lie Bagh Qazida and Pirwala. Sheikhupura Road on both sides shows plantation with occasional *mazars* such as Ziarat Jafar Shah Wali and Uncha Takia. The eastern side of Grand Truck Road is dominated by Mangal Singh Garden. The river narrows down near the baradari and, therefore, serves as a ferry point. Sheikhupura Road and Grand Trunk Road originated from this point and consequently a Police Chowki was set up here in order to regulate the traffic. After independence, the alignment of the road got changed to the north of the Baradari.

The southeastern side of the river is also dotted with numerous gardens. The area was divided into Shish Mahal ward and Garhi Shahu wards. The former contained Ravi Park with a temple on its south while the Garhi Shahu ward contained the area east of Ravi Road. The large area on its extreme northeastern side contained Shahdara-cum-Jhugian Plantation and the shrine of Nanak Chandwala with its flower garden, while the rest of the area on its south belonged to Allahbaksh Chaudriwala. The vast area on the western side of the Ravi Road belonged to Jia Numerdarwala. The map indicates that this vast area was full of flower gardens on both sides of Ravi Road.

View of River Ravi at Shahdara

Lahore and Environs (126): Survey Sheet No. 1 (opposite page)

RAVI RIVER

SHISH MAHAL WARD

GARHI SHAHU WARD

LAHORE & ENVIRONS

SHEET No. 1

Continuation Sheet No. 2

SYMBOLS AND ABBREVIATIONS

Municipal boundary with pillars

Ward boundary

Hindu ward No. 1 (Kucha city) . . . . . J H

Muhammadan ward No. 1 (Kucha city) . . . . . I M

Hindu ward No. 1 with name (outside city) . J H

Muhammadan ward No. 1 with name (outside city) . I M

Bridle road with cart track

Demolition road

Cart track

Camel path

Mule path

Foot path

Bridge

Railway, broad gauge (5' 6") single line

Scale 16 Inches to a Mile

Feet 100 0 500 1000 1500 2000 Feet

Yardage

Chains 5 4 3 2 1 0 5 10 15 20 25 30 Chains

Engineering Staff

1926.

SYMBOLS AND ABBREVIATIONS

Encroachment

Limits of cultivation

Gardens and flower beds

Caves and embankments

Bench mark of the Punjab boundary

Other Bench marks

Well, masonry lined

Water trough

Reservoir

Ghaznavite height

Relative height

Latrine

Pumping

Telegraph or telephone

Lahore and Environs (1926): Survey Sheet No. 3

The sheet covers an area located between the southwest corner of the Walled City in the north and Town Hall in the northeast, and extending from the Imperial Bank and Sacred Heart School in the southeast up to Chota Ravi on the western side. Punjab Veterinary College is the last significant building on this end. The most important feature of the plan is the junction of The Mall and Lower Mall. The Mall turns slightly southward and then intersects Lower Mall after passing by the Town Hall (built in 1890 and designed by Pogson, an architect from Madras) and continues towards Arya Samaj building. A Volunteer Club used to exist on the rear side of the Town Hall. The garden (known today as Nasir Bagh or Gol Bagh) extends up to the Town Hall building.

Central Model High School (top)

DAV High School (middle)

DAV College (bottom)

The land west of Circular Road was mostly used for cultivation. There was a *ziarat* (most probably Pir Makki) and on it was located Khalsa High School. The area between the Ziarat (Pir Makki) and shrine of Data Ganj Bakhsh was vacant. There was a slaughter house in an area where today stands Bilal Ganj. The area west of Lower Mall was primarily educational. North of the shrine of Data Ganj Bakhsh was Islamia High School. The shrine itself was eclipsed by at least four small mosques, one on each side. Just south of the shrine was Mela Ram Cotton Mills. The rectangular area south of Cotton Mill was occupied by Central Model School (1883), Central Training College (present building was built in 1887) and its boarding houses. Further south, the triangular area housed District Courts and the Police Superintendent's office. The area west of Central Training College had a number of significant educational buildings. These included the DAV High School (founded in 1886) and Punjab Veterinary College (designed by John Begg in 1911) and Jat Boarding House.

The area south of District Courts was planned on a grid pattern. The buildings were designed around open courts. The boarding house of Government College. The present new hostel (constructed in 1937) was located at the junction of Lower Mall and DAV College Road. The DAV College (presently Islamia College Civil Lines) was founded in 1886, in Lahore, by the efforts of Lala Hansraj. It manages 667 institutions today, 461 of which are high-schools. The site was acquired and construction initiated in 1909. The science block of the college was designed by Sir Ganga Ram and the Arts Block by Bhai Ram Singh in 1911. It was located opposite to the Police office. Moving southwards on Lower Mall from the Government College hostel the buildings that followed were hostels of DAV College, Sanatam Dharam High School, Agar Ashram, small courts, Punjab Provincial Cooperative Bank and the Secretariat. The road between the Ashram and the small courts was a continuation of The Mall and had Dev Samaj and Sidhan Ashram along it. The Secretariat buildings were planned within the landscape environment. The buildings that existed in this premises were Secretariat, Council Chambers (built 1920), departments, Financial Commissioner's office and the office of the I.G. Police. A dairy farm and Vida Ashram existed west of the Secretariat. The areas which were later developed into Sant Nagar and Krishan Nagar lay vacant. To the south of Punjab University across The Mall were located the Museum (foundations were laid in 1890), Punjab Public Library, Tollington Market (1864) and the PWD offices (completed in 1902.

The area between Lower Mall and Anarkali Bazaar was divided in the middle by another road known today as Abkari Road. The area flanking Abkari Road on the eastern and westerns sides was predominantly residential. However, Punjab Central Press and Civil Surgeon's Office and the attached dispensary were

important buildings at the junction of Anarkali Bazaar and Kutchery Road. St. Frances A.V. Middle School with the attached church was also located in the neighborhoods. The rest of the area was occupied by the educational buildings. Along The Mall, the Punjab University (University Laboratory, University Hall being designed by Bhai Ram Singh and completed in 1911) was located on the front and Senate Hall and the University Library on the rear side. The Director Public Instruction office was also located here. The Government College, designed by W. Purdon, was built (1872-77) on the east of Lower Mall. In font of Bhati Gate was a large open space and here also was Khalsa Primary School. Rolah Printing Press and D.A.V. Industrial School were located at the junction of Mohan Road (present Urdu Bazaar Road) and Chatterjee Road. The eastern side was mainly occupied by King Edward Medical College (Patiala Block built in 1915) and Newton Hall (1902), Mayo Hospital and Lady Aitchison Hospital. Chhaju Bhagat ka Chobara was also mentioned as being adjacent to Mayo Hospital. The area between Napier Road and Robert Road housed Forman Christian College, Imperial Bank of India, Sacred Heart School (1908) and St. Joseph High School while south of The Mall and east of McLagon Road was the Punjab National Bank.

Oriental College Lahore (top)

Civil Scretariat (middle)

Vetrenary College (bottom)

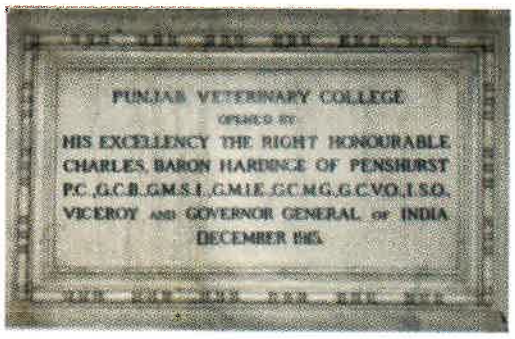
Inauguration plaque of Vetrenary College, Lahore (bottom left)

Lahore & Environs Survey Sheet No. 3 (page overleaf)

One of the major contributions of this period in the area is the King Edward Memorial Scheme which according to the administrative report of the Building and Road Branch for the year 1913-14 was the largest in the province. It was submitted to Government of India for sanction on 6th January 1914 and was finally approved later in the year. The cost of the project was about 36 lakhs of which 16½ lakhs had been contributed by private subscription. Some work on the extension of Mayo Hospital was undertaken. Between 1914 and 1915, the work went on in full swing. The scheme was formally opened by His Excellency the Viceroy on 10th December 1915 (Government of the Punjab, Public Works Department, 1916: 5). The scheme was comprised of extensions to Mayo Hospital, Nurses' Home, the Medical College and Research Institute (Patiala Block mentioned earlier) and several other smaller associated buildings. Mayo Hospital was one of the earliest projects built by the British on Italian style. It was designed by W. Purdon and completed at the cost of Rs. 1,58,951. This 100 bed hospital was opened in 1870 (Ross, 1883:129)

The most important contribution to civic design was the King Edward Square presently known as Nila Gumbad Chowk. It was designed by Basil M. Sullivan. A number of new buildings were added to it overlooking the Patiala Block and square. The buildings on the western side were kept low in order to maintain the view of Nila Gumbad (the shrine of Abdul Razzaq). It was mentioned that the removal of the overhead electric wires had done much to improve the surroundings of the medical college. Also, in this square there used to be a statue of King Edward overlooking Anarkali.

In short, the Britishers established modern educational, health and financial institutions in this area. These institutions were unique in their own way and played an important role in the subcontinent. The Government College, Central Training College, Forman Christian College, King Edward Medical College and Islamia College Civil Lines (formerly D.A.V College) are still considered to be the best educational institutions. These institutions produced leaders in their respective fields. The buildings on The Mall had lawns in front of them without fencing. This arrangement provided for a very soft image of the built environment. By 1920, the area had fully developed with buildings of high architectural merit.



LAHORE & ENVIRONS

31° 35'

74° 17'

S. 2300

S. 2350

RĀVI RIVER

CHHOTA RĀVI R

Vegetable garden

Bannowāla

Gūnja Kalān

Pindiwāla

Phulerā Arāiānwāla

Rangrānwāla

Ketanwāla

Barkārwāla

Mian Karim Bakhshwāla

Mahin Theodārwāla

Amlanwāla

Sirianwāla

Ambwāla

Jāt boarding house

Mehr Ghammewāla

Mehr Bassewāla

Bajawāla

Pipalwāla

Miri Sakhchwāla

Karārwāla

SHISH MAHAL WARD

Shaikh Tandewāla

Karamdinwāla

Mairājdinwāla

Dalip Nānwāla

Mehr Bakhshwāla

DAV College

Hatar Shāhwāla

Rathewāla

Malot Shādiwāla

Zaildār Muhammad Bakhshwāla

Kikarwāla

Firozdiwāla

Julkewāla

Kamālānwāla

Firozwāla

Ārya Anāthalay

Dīvān High

Rahimwānwāla

Rahim Bakhshwāla

Kotchwāla

Mahe Bhagwānwāla

Mānewāla

Kashmir Dairy Farm

Ashram

Sippowāla

Barawāla

E. 1650 Chains

E. 1600

Reg. No. 133 E.D.D. 1925 (3 D.C.)S.I.-100

SYMBOLS AND ABBREVIATIONS

Municipal boundary with pillars

Ward boundary

Hindu ward No. 1 (inside city) ..... I H

Muhammadan ward No. 1 (inside city) ..... I M

Hindu ward No. 1 with name (outside city) ..... I H

Muhammadan ward No. 1 with name (outside city) ..... I M

SHISH MAHAL WARD

Metalled road with mile stone

Unmetalled road

Cart track

Camel path

Mule path

Foot path

Hedge

Railway, broad gauge (5' 6") single line

Wire fence, railing or palisade

1926.

Scale inches to

Feet 100 0 500 1000

Chains 5 4 3 2 1 0 5

Sheet No. 2

Continuation Sheet No. 8

Continuation Sheet No. 4

31° 35'

31° 34'

74° 19'

E. 1660

Khālsa High school
Ziārat
Temple
Mosque
Islāmia High school
Mela Ram cotton mill
Slaughter house
Boarding house
Bradlaugh Hall
CENTRAL TRAINING COLLEGE
PUNJAB VETERINARY COLLEGE
DISTRICT COURT
Police Lines
Govt. College
Chemical Laboratory
Law College
Civil Dispensary
Punjab Central Press
Model Press
Victoria Girls' school
Municipal Reading Room
Khalsa Primary school
Hariān Mandir
M. Gulab Singh's Printing Press
Ice Factory
D.A.V. Industrial School
Municipal cattle ware
Bandhar Temple
PS No. 1 Anarkali
ANARKALI
Lady Lyall Block
Lady Aitchison Hospital
Tennis Courts
Shahpur Block
ANARKALI WARD
KING EDWARD MEDICAL COLLEGE
Ewing Hall
Hewson Hall
St Joseph's School
Sacred Heart School
Forman Christian College
Imperial Bank of India
Punjab National Bank
MAYO HOSPITAL
Oriental College
St Francis A.V. Middle school
Cholera Swarn
River Victor
Tuberculosis ward
WSM 709
Boarding house (Govt. College)
Boarding house (Vet College)
Boarding house (D.A.V. College)
Boarding house (D.A.V. School)
Khalsa boarding house
D.A.V. Ayurvedic College
Sanātan Dharam High school
Hockey ground
Dev Samaj
Small Dues Godown
Municipal Hall
Financial Commissioner's Office
Civil Hospital
Punjab Provincial Co-operative Bank
SECRETARIAT OFFICES
COUNCIL CHAMBER
Tomb of Anārkali
C.I. Department
Offices of I.G. Prisons
Volunteer Club
Punjab Public Library
PWD Offices
Senate Hall
University Library
University Laboratory
Director Public Instructions
Maya School of Arts
Museum
Tollinton Market
Punjab Co
YMCA
MALL
UPPER
Temple
Mosque
Ziārat
Tank
Hindu Temple
Sikh Temple
Jain Temple
Arya Samaj
Christian Church
Graveyard
Hindu Burning Ground
Municipal Reading Room
Chah
Well
Tube Well
Pump
Latrine
Hydrant
Boundary Pillar
Trigonometrical Station
Telegraph Line
Railway
Road
Metalled
Unmetalled
Footpath
Bridge
Culvert
Ford
Ferry
Embankment
Limits of cultivation
Contours and form line
Canal and distributary
Bench mark of the Precise Levelling
Other Bench mark
Well, masonry lined
Water trough
Reservoir
Clinometric height
Relative height
Latrine
Hydrant
Covered in passages

SYMBOLS AND ABBREVIATIONS

B M 440.
MSM 709.
W.T.
R.
440.
Br.
L.
H.

1926.

Scale inches to a Mile

1000 2000 Feet

15 20 25 30 Chains

Lahore and Environs (1926): Survey Sheet No. 4

The section of the city represented in this map comprised Anarkali Ward, Mozang Ward and Shish Mahal Ward. It enclosed Sanda Khurd and Raj Garh in the west, Bhundpura in the east, Punjab House in the south and Dhobi Mandi in the north.

On the western side of the Lower Mall, a narrow belt of fine bungalows extended up to Chauburji monument. A large area between these bungalows and the western edge of the map was dotted with agricultural farms specializing in vegetables. Only two villages of Raj Garh and Sanda Khurd were located here. From Chauburji, two roads extended further in the southwest direction. Punjab House was located on one end which extended towards the eastern side. This residential area only contained Sanatam Dharam College at the junction of Lake Road and the Lower Mall. In addition, Punjab Government Press existed south of the office of the Director Agriculture and Victoria Girls School. Jind House was located within the residential area located on the northern side.

Recreation Ground for F.C. College (currently Government College Cricket Ground) was located on the eastern side of the Lower Mall. The rectangular area east of the recreation ground housed the National Bank of India (on the site of Central Police Station) on one end and Anarkali Police Station on the other. The lower end of the rectangle housed the Government Normal School and attached residences (later Lady Mclagan College and now University of Education). The east of Lake Road was lined with residences. Behind these residences was a large graveyard (Miani Sahib).

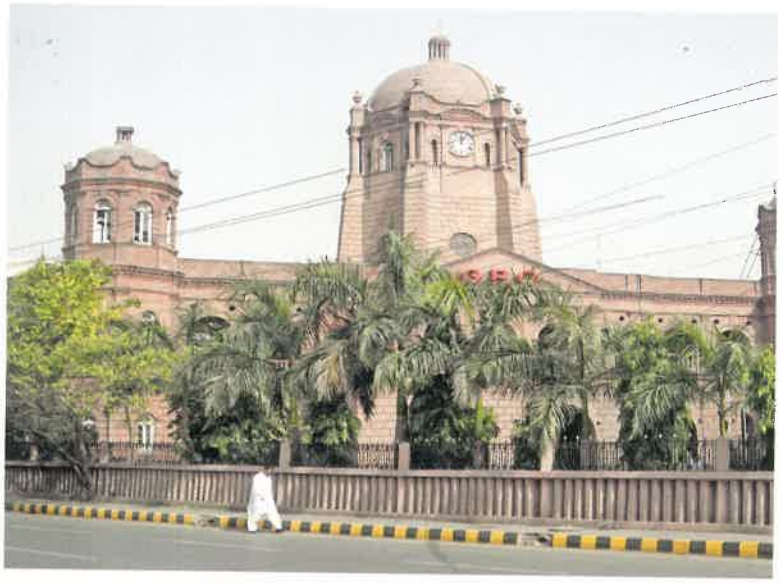
Dhobi Mandi was situated between Anarkali Bazaar, Maclagon Road and Nabha Road. The area south of Nabha Road housed Kapurthala House and the Shah Chiragh shrine. Between Mozang and Old Anarkali, the area north of Begum Road contained large houses including Farid Kot House. Between Maclagon Road, Nabha Road and Upper Mall was located the Punjab National Bank and General Post Office (1904). The most important buildings south of Upper Mall and east of Nabha Road were High Court (1889), Sessions Court and Paper Currency Office (State Bank Building). The last mentioned project was designed by Basil M. Sullivan during 1920-21.

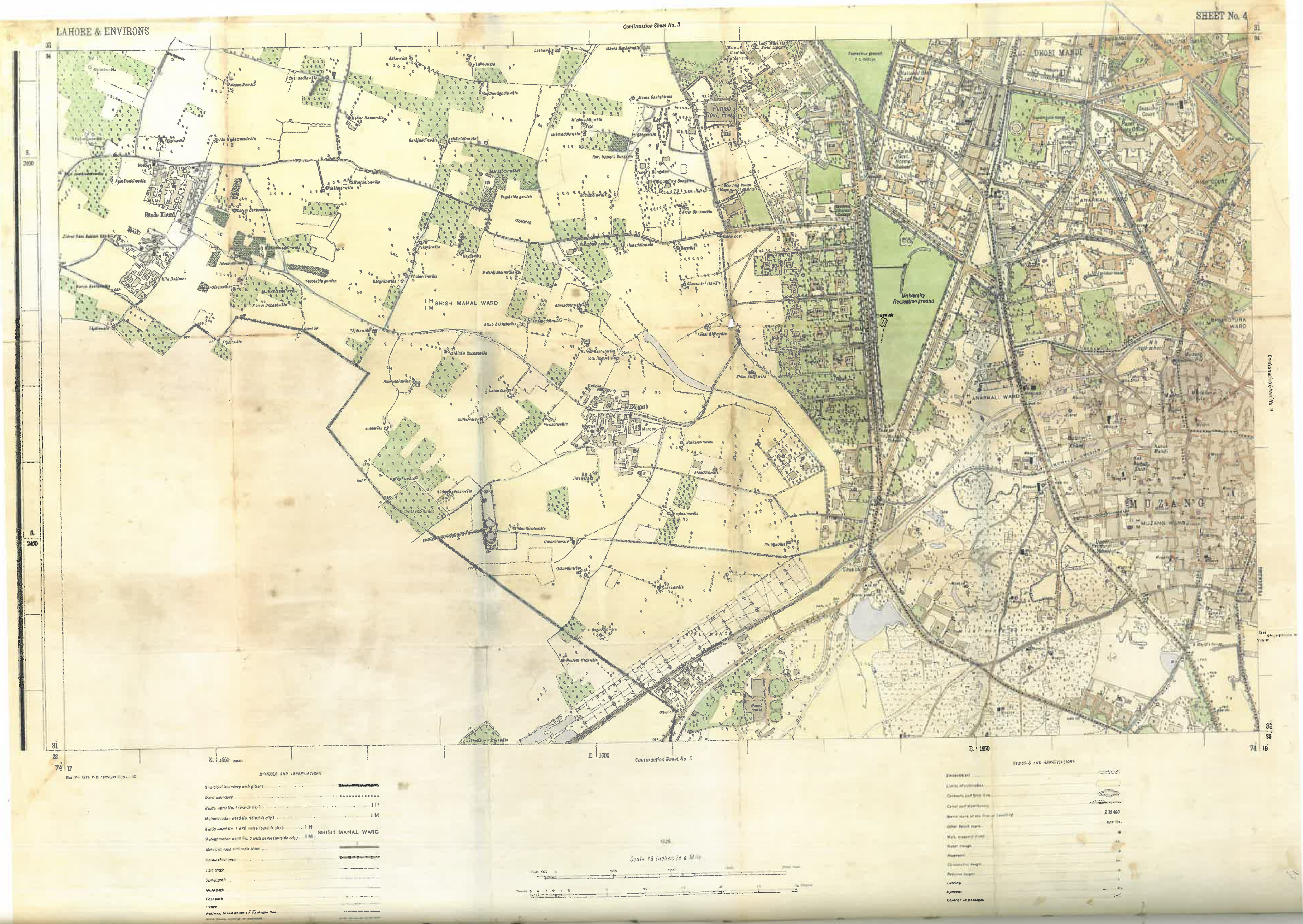
The Mozang Ward had narrow winding lanes with buildings different in sizes and facing all directions. It had a *sarai*, several mosques and shrines. It also had its own *bazaar*, Kanak Mandi, and Butcher Khana. The important *mohallas* were Kot Abdullah Shah, Mohalla Ghausian, Mohalla Chah Pichwara, Qureshi mohalla, Bhondpura, Mubarakpura and Mohalla Takia Nur Shah. From the plan and buildings mentioned in the map it appears that Mozang was predominantly a Muslim settlement. A number of tombs existed outside the built-up area, but during the British period residential settlements encircled them from different directions. Today, these tombs coexist with houses throughout the built-up area.

Lahore and Environs
Survey Sheet No. 4
(opposite page)

The map contained a variety of features in urban landscape design. On the one hand, it had planned bungalows west of Lower Mall, a large graveyard (Miani Sahib), and finest examples of architecture of public buildings along the Upper Mall and on the other hand, it had the indigenous settlement of Mozang.

General Post Office (right)
Paper Currency Office (left)





LAHORE & ENVIRONS
SHEET No. 4
Continuation Sheet No. 3
Continuation Sheet No. 5
Continuation Sheet No. 9
SHISH MAHAL WARD
ANARKALI WARD
DHOBI MANDI
MUZANG
MUZANG WARD
Sando Khurd
Baigarh
University Recreation ground
Punjab Govt. Press
Vegetable garden
HIGH COURT
G P O
E. 1550
E. 1600
E. 1650
SYMBOLS AND ABBREVIATIONS
Municipal boundary with pillars
Ward boundary
Metalled road with mile stone
Cart track
Camel path
Mule path
Foot path
Hedge
SHISH MAHAL WARD
Embankment
Limits of cultivation
Cemetery and Tomb
Canal and distributary
B M 460.
Well, masonry lined
Reservoir
Latrine.
Hydrant
Scale 16 Inches to a Mile

Lahore and Environs (1926): Survey Sheet No. 6

The northern side of Lahore was predominantly agricultural during the British period. This map covers an area between the Shahdara-cum-Jhugian plantation and Bhamman village located north of Chota Ravi River and clearly shows this situation. The only village that existed in between was Khokar. There were several clusters of plantation scattered throughout the site. In addition, wells with an attached room were spread over the entire area which used to irrigate agricultural land owned by a respective landlord. The area was neither important from the historical, nor from architectural point of view.

Tomb of Baba Allah Hu located south side of Bahmman (top left)

Graveyard of Chanan Shah Wali, north side of Bahmman (top right)

General view of Khokhar (bottom)

Lahore and Environs (1926) Survey Sheet No. 6 (opposite page)

The important wells included in the map are Jalaldinwala, Muhammad Shahwala, Jhandawala, Tara Khanwala, Guru Jalalwala, Mulla Nathuwal, Chiraghwala, Allahditawala, Mehar Pir Bakshwala, Allahditta Numberdarwala, Diwan Buramanwala, Kamardinwala, Karim Bakshwala, Lal Chandwala, Harnam Khatriwala, Ghulab Singwala, Bura Malwala, Chiraghdinwala, Allah Bukshwala, Kadir Bakhshwala and Kalawala.

The suburban villages of Bahmman and Khokhar are located on the northern side of Bund Road. Bhamman is older than Khokhar. The former is about 250 years old while the later is 150 years old. A large graveyard developed around the shrine of Chanan Shah Wali (d. 1770) has developed north side of Bhamman village. A modern open drain carrying sewerage and industrial waste of northern Lahore separate the residential area from graveyard. These villages are surrounded by open fields but lack urban amenities.

E. 1700 Chains

E. 1750

E. 1800

74° 19' 31° 37'

74° 21' 31° 37'

Shāhdara - Jhangīr plantation

Khokar

Bhammān

GARHI SHĀHU WARD

V H
V M

SHISH MAHAL WARD

I H
I M

CHHOTA RĀVI RIVER

Continuation Sheet No 11

Continuation Sheet No 7

LAHORE & ENVIRONS

SHEET No. 6

SYMBOLS AND ABBREVIATIONS

Municipal boundary with pillars
Ward boundary
Hindu ward No. 1 (inside city) — I H
Mohammadan ward No. 1 (inside city) — I M
Hindu ward No. 1 with name (outside city) — I H
Mohammadan ward No. 1 with name (outside city) — I M
Metalled road with mile stone
Unmetalled road
Cart track
Camel path
Main path
Foot path
Hedge
Railway, broad gauge (5' 6") single line
Wire fence, railing or pailings

Scale 16 Inches to a Mile

Feet 105 0 500 1000 1500 2000 Feet

Chains 0 4 5 7 10 5 10 15 20 25 30 Chains

1926

SYMBOLS AND ABBREVIATIONS

Embankment
Limits of fortification
Cuttings and bank side
Canal and distributary
Bench mark of the Punjab Levelling
Other Bench mark
Well, masonry lined
Water trough
Reservoir
Culvert or bridge height
Relative height
Latrine
Hydrant
Covered in passages

Lahore and Environs (1926): Survey Sheet No. 8

This map covers an area from the southeastern portion of the Walled City in the northwest and Patiala House in the southwest to Isolation Hospital in the northeast and Railway Quarters in the southeast. The major settlements covered in this map are the southeastern portion of the Walled City, Goal Mandi (Gwalmandi) Patiala House, Goat Mandi, Nila Gumbad Mohalla, Qila Gujar Singh, Sarai Sultan and Landa Bazaar, Lahore Railway Station and the surrounding area including Lines and Railway Quarters on both sides of the Railway Line in Garhi Shahu Ward. The major wards included the Walled City Ward, Goal Mandi Ward, Qila Gujar Singh Ward. A large portion of the area in the map was planned during the British period.

The following important bazaars of the Walled City are shown in the map: Gumti Bazaar, Suha Bazaar, Shisha Moti Bazaar, Wachowali Bazaar, Papar Mandi, Machhi Hatta Bazaar, Sirianwali Bazaar, Katra Wali Shah Bazaar, Bazaar Mochi Gate, Lakar Mandi Bazaar, Nurian Bazaar, Akbari Mandi Bazaar, Delhi Gate Bazaar, Nurian bazaar, and Gur Mandi. The map contains numerous mosques shown scattered all over the Walled City with occasional temples. The map also shows the location of wells which could be found in the streets, *bazaars* and with large houses and mosques. The Walled City is depicted with all its design quality. The major *bazaars* divided the city into residential quarters. The residential areas were further accessed by narrow winding lanes, thus keeping the privacy of the residential area from busy traffic of the bazaars. The Walled City was surrounded by a circular garden as can be seen in the map. A *gunda nala* (open sewer) is also shown outside the city wall. The Khanqah of Shah Muhammad Ghaus was located within the circular garden.

Outside the Walled City, the most important feature of urban planning was the road layout. A large number of roads radiated from the Railway Station and extended towards the newly-planned areas. The other roads originating from the old city gates bisected these modern roads. The very first roads were Mayo Road, Empress Road, McLeod Road, Railway Road, and Landa Bazaar Road.

The roads which originated from the gates of the Walled City connected it to the eastern and southern suburbs. The road which emerged from Shahalam Gate was Ratan Chand Road with Ratan Chand Sarai and Tank on its western side. It passed further through Chajju Bhagat Chubara, Bagh Mian Ranjha and Patiala Rest House before joining McLeod Road. At the junction of Mission Road and Ratan Chand Road lay the Divinity College. At the end of this road and McLeod Road, one would come across the Medical College boarding house designed by Basil M Sullivan. From Mochi Gate emerged Chamberlain Road and Barkat Ali Khan Road. Fleming Road continued further south from the junction of Railway Road and Chamberlain Road. From Delhi Gate another road passed through Landa Bazaar Road to join the Railway Station. The other roads were Circular Road (encircling the Walled City), Bull Road, Goal Mandi Road (later Nisbat Road), Shalamar Road, Dufferin Road (parallel to railway lines on its northern side) and Grand Trunk Road (north of Railway Station across the railway lines).

The Lahore Divinity School started on November 22, 1870. The roof of the building which was used as a chapel collapsed after some years and a new chapel was built in its place which exists to this day. In early days a pool which was present in the school ground was used as a baptistery. "The garden was a delight to all, one of the students prayed that this garden in which we are gathered might have four streams, like the Streams of Paradise, flowing forth all the way to refresh the barren waste around. The students were able to enjoy bathing and playing cricket and other games in the garden. Other buildings were added as funds permitted (Stacey, 1993: 60)."

The area outside the Walled City was not fully developed. A large area around Sarai Sultan was still open by this time with a limited built-up area north of Landa Bazaar (today known as Mohalla Dara Shikoh). Similarly Nila Gumbad Mohalla (the mohalla is named after the blue dome of the tomb of Musa Aahangar) still remains mostly un-built. The layout of the streets outside the Walled City shows several concepts in urban design. For example, the Goal Mandi Ward appears to have been developed in two phases. The area between Circular Road and Railway Road has informal but compact planning. A significant area at this place still remains un-built or exists in the form of a green space. Similarly a ribbon development may also be seen along Mission Road and Goal Mandi Road. The land in between these roads remains un-built. The area between

Sarai Ratan Chand (top left)

Burt Institute (top right)

Lahore and Enviroment (1926) Survey Sheet No. 8 (page overleaf)

Goal Mandi Road and Railway Road was laid out on a gridiron pattern. The right angle streets divided the area into regular blocks but houses were planned around central courtyards. This area contained *Mewa* Mandi along Fleming Road.

In 1927 Lahore and Amritsar Improvement Trust report mentioned that "Between the old city and the bungalow area of civil station a number of thickly populated mohalla's come into existence such as:

a) Anarkali,

b) Gwalmandi to the south of Railway Road and the area to the north of that road.

c) Part of Ramgali, Landa and Lohewala Bazaar

d) Qila Gujar Singh and adjoining blocks on the other side of the McLoaed Road. Further to the south are Mozang and that plague spot known as Garhi Shahu. Not much land remains to be built upon to the south of the old City."

The residential area on either side of Empress Road had another kind of planning concept. Large bungalows planned in the middle of large plots with front and back lawns and approached by driveways are seen to be the main feature of physical planning. This area was inhabited by European officers and for their convenience four churches, namely St. Andrew's Church (1910), American Mission Church (chapel was constructed in 1853), Mclagan Methodist Church (1880) and R. C. Church (1899, now St. Anthony's church) were constructed. Besides residences, the area contained Kinnaird High School, Kinnaird College, Railway Office and Lime Tree Hotel opposite the R. C. Church. In front of the Railway Station at the beginning of Empress Road, there used to be a large tank named as Mela Ram Tank (where Asia Hotel was built).

The most significant urban pattern existed on either side of the Railway Line where streets were laid on grid iron or rectilinear axes. Thus, back-to-back regular sized plots subdivided the land between two parallel roads. The houses were planned in the middle of the plots with significant open spaces left all around them. In this way, these communities were conceived as low-rise low-density settlements. Each house had a fine hydrant in the middle of the lawn. The major roads which ran north-south between Mayo Road and Jacob Road were Brackenbury Road and Hollow Road. These were properly furnished with recreational facilities. The settlement on the southern side of the Railway Line had hockey and football grounds and the Railway Institute (today known as Bert Institute). Four roads, namely Pemberton Road, Victoria Road, Stanton Road and Hancock Road on the northern side of the railway line ran along the east-west axis and linked the settlement with Grand Trunk and Shalamar roads. Across Grand Trunk Road, a Cooperatives Store and a market area would fulfill the daily grocery requirements of the nearby residents. The land between Sultanpura and Grand Trunk Road was still inhabited, interspersed with a few structures of Chamra Mandi and Punjab Glass Works.

The plan for the development of housing for its officers and employees of the railways has been discussed in Lahore and Amritsar Improvement Trust Committee report of 1927 in the following words: "About 1000 acre has been acquired and laid out for the residence of different classes of employees to the number of 18000. Mayo Garden is a model of what the residential part of a garden city should be like; and the quarters built for railway workers and menials are the only buildings of the sort of Lahore." (1927 p.3)

LAHORE & ENVIRONS

Continuation Sheet No. 3

Sunahri Masjid

GOAL MANDI

GOAL MANDI WARD

SHISH MAHAL WARD

VH IVM LANDA BAZAR WARD

RAM GALI MOHALLA

KILA GUMBAD MOHALLA

KILA GUJAR SINGH

Sabzi Mandi

Mewa Mandi

Gur Mandi

Ahmadia Buildings

Muslim High school

Islamia College

Islamia College play ground

Dyal Singh College

Divinity College

Medical College hostel

Boarding house

Bharat Buildings

Tribune Printing Press

Patiala Rest house

Municipal cattle pound

Police station

Hockey ground

Tennis court

Graveyard

Russa Engineering works

Flour mill

Iron foundry

Technical Institute

Ry Police qrs

Sarai Sultan

Deorampura Dev Dyal

Lawyer Begam house

Shah Md Ghauns

Khanqah

Temple of Chhota Bhagat

Bhagwan Das temple

Sarai Ratan Chand

Sadr Bazar

Anarkali Bazar

Lohe Wali

Mochi Gate

Shah Alami gate

Sultan gate

Akbari gate

Lahore Gate

Delhi Gate

Sandal Kala

Ganda Nala

Ravi Road

Lower Mall

Montgomery Road

Fleming Road

Temple Road

Circular Road

Bund Road

Nisbet Road

Empress Road

Mall Road

Egerton Road

Jail Road

Ferozepur Road

Lytton Road

Cemetery

Church

Mosque

Temple

Dharamsala

Tennis court

Hospital

Police station

Municipal cattle pound

Laboratory

Graveyard

Ravi

Ganda Nala

E. 1700 Chains

E. 1750

Continued

Reg. No. 133 E.D.D.1926 (3D.O.J.S.)—100

SYMBOLS AND ABBREVIATIONS

Municipal boundary with pillars

Ward boundary

Hindu ward No. 1 (inside city) I H

Muhammadan ward No. 1 (inside city) I M

Hindu ward No. 1 with name (outside city) I H

Muhammadan ward No. 1 with name (outside city) I M

Metalled road with mile stone 2

Unmetalled road

Cart track

Canal path

Mule path

Foot path

Hedge

Railway, broad gauge (5' 6") single line

Wire fence, railing or palisade

Scale 16 I

Feet 100 0 500

Chains 5 4 3 2 1 0 5 10

31° 35

Sultānpura
Tannery
Miari Shah
Octroi post
Krishna flour mills
Punjab Glass works
Chamra Mandi
V H
V M GARHI SHAHU WARD
Acid factory
Isolation Hospital
Goods Shed
Mosque
NWR school
Market
Co-operative stores
Post office
LAHORE R S
Brandreth Hall
KILA GUJAR SINGH WARD
Carriage stand
NWR treasury
NWR Police lines
Dhobi ghat
PELHAM ROAD
N W RAILWAY
Signal office
Mosque
Kinnaird College
NWR dispensary
Rest house NWR officers
NWR Police office
GORDON ROAD
RAILWAY WORKSHOPS
Kinnaird High school
NWR offices
Old Loco tank
American Mission Church
Football ground
Tennis court
Hockey ground
Railway Institute
V H
V M GARHI SHAHU WARD
Nawab's Palace
Railway officer
Police Lines
Lime Tree Hotel
V H
V M GARHI SHAHU WARD

Continuation Sheet No. 12

Sheet No. 7

Sheet No. 9

1 Mile = 1800

74° 31° 34 21

SYMBOLS AND ABBREVIATIONS

Embankment
Limits of cultivation
Contours and form line
Canal and distributary
Bench mark of the Precise Levelling — B M 440.
Other Bench marks — M B M 703.
Well, masonry lined — ⊕
Water trough — W T
Reservoir — R
Climatometric station — Cli.
Relative height — 3r.
Latrine — L
Hydrant — H.
Covered in passages

1 Mile = 1500 2000 Feet

15 20 25 30 Chains

Lahore and Environs (1926): Survey Sheet No. 10

This map shows the details of settlements located in the south of Lahore. The important building and landscape features given in this map are Government Officers Residence (G.O.R), Race Course, Punjab Lunatic Asylum, Female Penitentiary, Borstal Jail, Birdwood Barracks and a portion of area from Bhundpura Ward. The entire area was mostly green and land plot sizes were fairly larger. G.O.R and Race Course were resided by senior government officials. Within G.O.R were located Chamba House and the shrine of Shah Shamas.

Jail Road and Ganda Nala (Mian Mir Drain) were two important physical features of the site. The Race Course and G.O.R were located on the northeast of Jail Road. The Borstal Jail, Central Jail (the outer wall, ditch, first circle of barracks and hospital completed in 1854 and the second circle completed in 1862), Lunatic Asylum and Female Penitentiary (1870) all were located south of Jail Road. The Lahore District Jail was built in 1875-76 after the demolition of Golian wali Sarai (built during Jahangir's reign). Within G.O.R, only the road network and a few bungalows were constructed along Golf Road and The Mall. Similarly a number of large bungalows with open spaces all around had been constructed along Race Course Road. The bungalows had driveways with oval or semicircular lawns on the front side. The largest bungalow existed at the junction of Race Course Road and Jail Road. On the extreme southeast end was located the cemetery (Gora Qabristan). A dairy farm for Salvation Army was constructed on the site presently occupied by Kinnaird College at the junction of Bari Doab Canal and Jail Road. One of the important features of the map was the quinine factory shown east of Central Jail and a vegetable garden on its extreme west. Today most of the area occupied by Central and Borstal jail has been transformed into Government Officers' Residences and private residences (Shadman Colony) adjacent to Bari Doab Canal. The area stretching from the southwest end up to Ichhra was still open with a number of kilns on both sides of Ferozepur Road. The important historical structures shown in this part are Mata Rani Temple (the area is still remembered by this name) and Bhairon Temple with Asthanwala. The area around Waris Road, Birdwood Barracks and the land north of Jail Road at its junction with Ferozepur Road were occupied by small bungalows. All these bungalows had green spaces around them. There were some important buildings north of Birdwood Barracks and these included the Chemical Examiner's office, Government Power House and Punjab Government Treasury. The Birdwood Barracks were walled and occupied by the army. Punjab Vaccination Depot was located south of these barracks. Hence, this area was almost completely planned. In the north-western corner of the map lies the fountain and tank of Mela Ram.

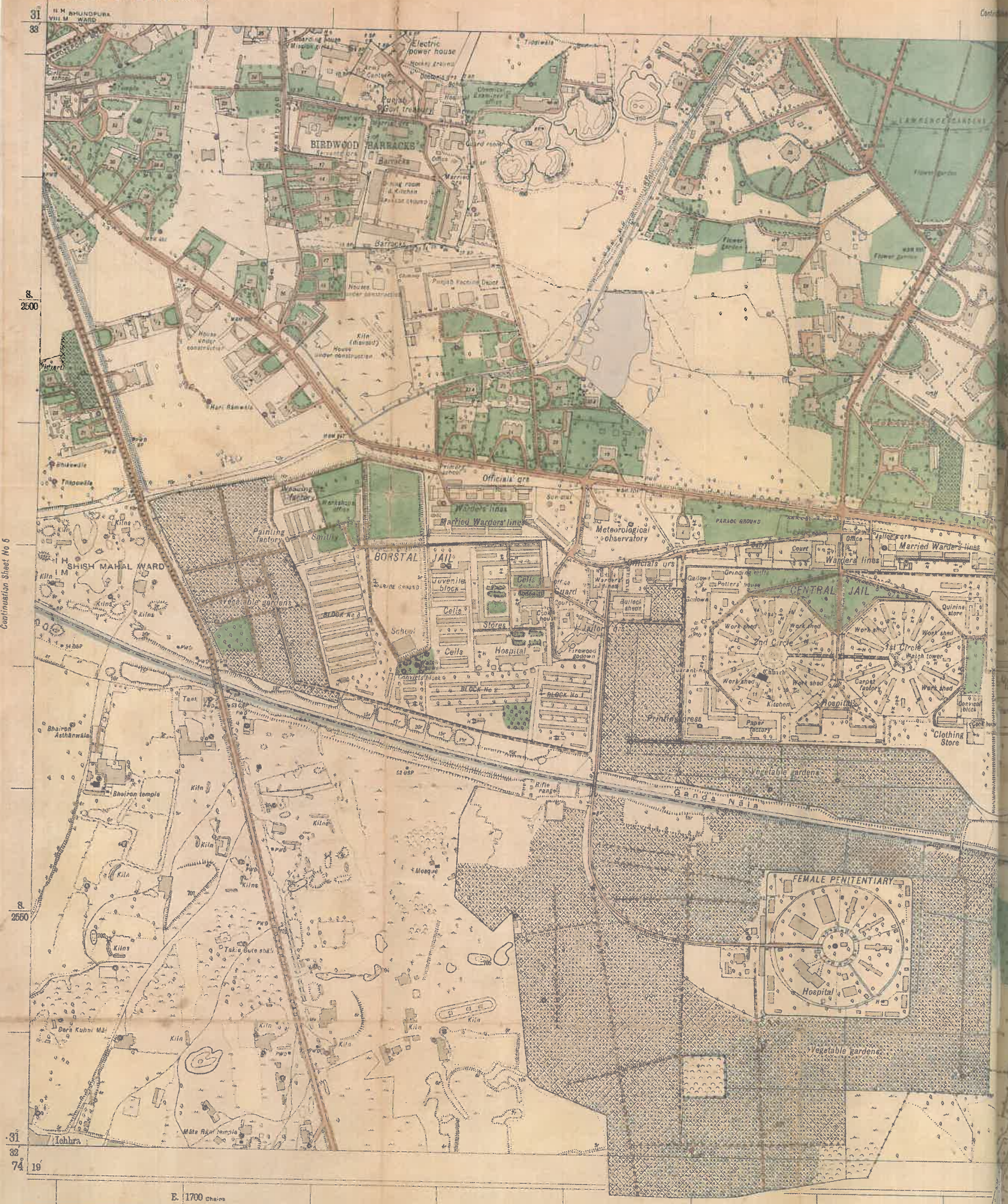
Observatory Lahore Meteorological Department (top)

Gateway of Birdwood Barrakes on Birdwood Road (middle)

Mela Ram Tank at the Junction of Waris Road and Ferozepur Road (bottom)

Lahore and Environs (1926) Sheet No. 10 (page overleaf)

LAHORE & ENVIRONS



Reg. No. 133 E.D.D.1926 (3 D.O.) S.I.-100

SYMBOLS AND ABBREVIATIONS

- Municipal boundary with pillars
- Ward boundary
- Hindu ward No. 1 (inside city) .... I H
- Muhammadan ward No. 1 (inside city) .... I M
- Hindu ward No. 1 with name (outside city) .... I H SHISH MAHAL WARD
- Muhammadan ward No. 1 with name (outside city) .... I M
- Metalled road with mile stone 2
- Unmetalled road
- Cart track
- Camel path
- Mule path
- Foot path
- Hedge
- Railway, broad gauge (5' 6") single line
- Wire fence, railing or palisade

Scale 16 inche

Feet 100 0 500

Chains 5 4 3 2 1 0 5 10

Contour li

Continuation Sheet No 9

31 / 33

Shamla House

Mosque

Shrine of Shah Shamas Kari

GOLF ROAD

IV H VI M KILA GUJAR SINGH WARD

RACE COURSE

IV H VIII M BHUNDPURA WARD

RACE COURSE ROAD

Ward

Nersingh Dass Garden

FEMALE ASYLUM

SALVATION ARMY DAIRY FARM

BARI DOAB CANAL (Lahore Branch)

Kiln

Mosque

Kiln

PUNJAB LUNATIC ASYLUM

Kiln

31 / 32

74 21'

E. 1800

SYMBOLS AND ABBREVIATIONS

Embankment	
Limits of cultivation	
Contours and form line	
Canal and distributary	
Bench mark of the Precise Levelling	B M 440.
Other Bench mark	MBM 793
Well, masonry lined	
Water trough	WT
Reservoir	R
Chronometric height	440.
Relative height	3r.
Latrine	L
Hydrant	H
Covered in passages	

e 16 inches to a Mile

1500 2000 Feet

15 20 25 30 Chains

OUR (Varies 10 feet

Continuation Sheet No 14

Lahore and Environs (1926): Survey Sheet No. 11

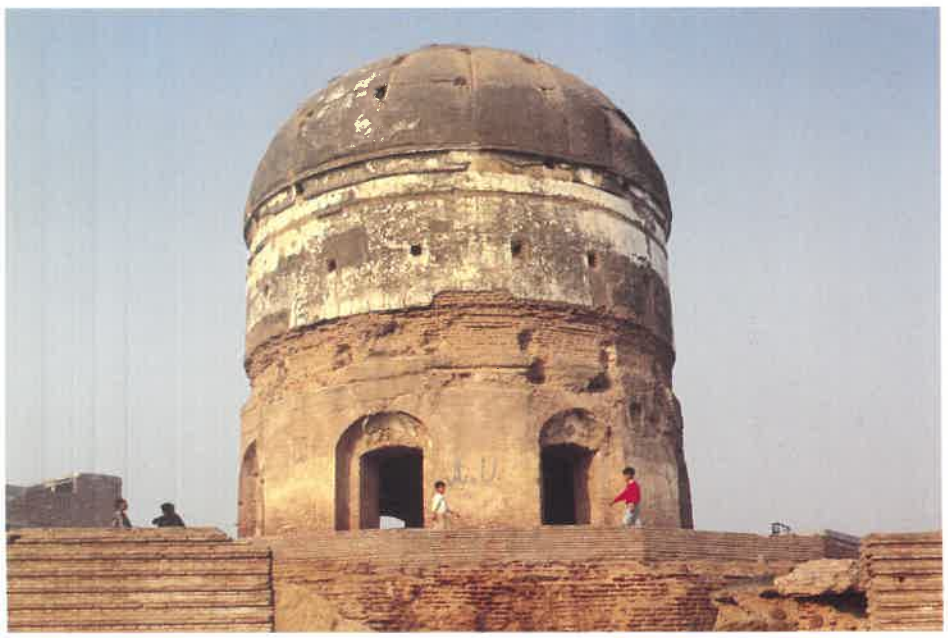
Lahore and Environs (1926) Survey Sheet No. 11 (opposite page)

This map covered the area around Kot Khoja Said (Kot Khawaja Said) which abounded with Mughal and Sikh period gardens. The area was mostly agricultural with occasional houses and mosques spread all over the area. The Chota Ravi River flowed on the north of the village of Kot Khawaja Said and irrigated the land. Important structures included the tomb of Prince Pervaiz and the shrine of Sher Singh. Gore Shah and Singhpura defined the lower boundaries of the map whereas Bhagatpura was located on the northern side. The important gardens mentioned in the map were Teja Singh Garden, Dina Nath Garden, and Ghulam Muhammad Garden.

Prince Pervaiz was second son of Mughal Emperor Jahangir. His tomb stood on an eminence in the midst of cultivated fields on a circular platform resting on another platform of octagonal shape. The tomb was, once, located in a vast garden. The tomb has a circular plan from the exterior and octagonal from the interior. The cylindrical base, cylindrical drum and low pitched dome make it unique in Lahore's architectural history. It was once clad with stone but today it is in miserable condition. To the east of the garden was the Garden of Prince Dara Shikoh. It was embellished with a *baradari,* a tank and fountains of water, but these have all disappeared now.

Tomb of Prince Pervaiz (left)

Sher Singh Baradari right)



To the northwest of residential settlement lies the tomb of the daughter of Khawaja Said. It was once covered with lattice work of red sandstone. The dome was also clad with stone which was damaged during the Sikh period. The tomb of Ahmad Ali Shah is also located close to the tomb of Prince Pervaiz. It has a quadrangular dome, on a raised platform.

An Eid Gah, once, used to be an important monument of the area. Today, only its *mihrab* survives. The arch of the *mihrab* has muqarnas (stalactite vault) in the soffit. The geometrical patterns on the façade were carved out from thick lime plaster. The Eid Gah is said to have been built at about 825 AH by Syer Mubarak Shah when he rebuilt Lahore. It is probably one of the earliest surviving structures in Lahore.

LAHORE & ENVIRONS

Season 1925.

Mean Magnetic Declination 2° 6' East (in 1925).

(Decreasing by 4' annually).

Origin = Survey. Latitude 32° 6' 0" Longitude 74° 57' 32"·82

SYMBOLS AND ABBREVIATIONS.

Municipal boundary with pillars

Ward boundary

Hindu ward No. 1 (north side)

Mohammadan ward No. 1 (south side)

Hindu ward No. 1 (also Hindu-Christian city)

Mohammadan ward No. 1 (also municipal city)

SHISH MAHAL WARD

Metalled road with mile stone

Unmetalled road

Cart track

Bullock path

Foot path

Bridge

Railway, broad gauge (5 ft 6 in.) single line

Wire fence, railing or palisade

SYMBOLS AND ABBREVIATIONS

Embankment

Limits of cultivation

Contours and form line

Canal and distributary

Bench mark of the Previous Levelling — B.M. 630.

Other Bench marks

Well, masonry lined

Water trough

Reservoir

Trigonometric height

Relative height

Latrine

Hydrant

Covered in passages

Scale 16 inches to a Mile

Feet 1000 0 500 1000 1500 2000 Feet

Chains 0 4 8 12 16 0 5 10 15 20 25 30 Chains

Contour Intervals 10 feet

1925.

Index to Sheets

1	6	11
2	7	
3	8	12
4	9	13
5	10	14

GARHI SHAHU WARD

V H
V M

CHHOTA RAVI R.

Kot Khoja Saiyid

Singhpura

Continuation Sheet No. 12

SHEET NO. 11

159

Lahore and Environs (1926): Survey Sheet No. 12

Main Block Mclagan Engineering College (top)

Saru Wala Maqbera (middle)

Tomb of Ali Mardan Khan (bottom)

The eastern side of Lahore received great attention during the British period due to the establishment of locomotive and carriage shops. This area already had numerous Mughal period tombs and gardens already mentioned in the map of 1867. During the British period, it came under the Garhi Shahu Ward. Two important roads which used to originate from Delhi Gate passed through this area. These were Grand Trunk Road (GT Road) and Mughalpura Road. The area north of Grand Trunk Road had a number of historic settlements, tombs and mosques. However, on the southern side were fewer monuments. Moving along Grand Trunk Road from the Railway Store towards the western side, the first structure one would come across was Dera Kuma Sing, on the northern side. There was a small mosque on the southern side. Mclagan Engineering College (currently University of Engineering & Technology) was the next important project developed along the road. It was established in November 1921 as Mughalpura Technical College, but in 1923 it was named Mclagan Engineering College when Sir Edward Mclagan, then governor of the Punjab, laid the foundation stone of the building, now referred to as the main block of the university. The main purpose of this college was to train engineering professionals who would take up various responsibilities in the newly-developed workshops. The main building, senior and junior students' hostels and residences for the faculty and clerical staff are clearly shown. Opposite the college lay Buddu's tomb and Rifle Range.

The next important settlement located further east was Begumpura. This settlement had numerous monuments all around it. The Ghulabi Gate, tomb of Dai Anga, mosque (Begum Shahi Masjid), Rauza Hazrat Aishan and the attached mosque, Saruwala Maqbara and the associated residential settlement are all important monuments that could be found at this place. Further east was Sunearanwali Sarai. The map does not cover any other monument up to Shalamar Gardens on the north of the road.

The area between Grand Trunk Road and Shalamar Road was now fully occupied by Railway Loco Workshops. During the Mughal period, the area had numerous monuments including the tomb of Hamid Kari and the tomb garden of Ali Mardan Khan. Both are now surrounded by workshops. The southern side of Mughalpura Road had an Engine (locomotive) shed. The entire area up to Wheatman Road (connecting G.T Road and Mughalpura Road) was traversed by numerous railway tracks. The physical planning was such that the northern side of Mughalpura Road was lined with the Loco Audit Office building and the bungalows of railway officers. At the back or on the northern side was the workshop. It was enclosed by a masonry wall having two main gates. The significant structures in this area close to Mughalpura Road were workshop sheds, a smithy, boiler shop, a molding shop and stores and the office of the Locomotive Works Manager. Another group of structures on the rear side but close to the tomb of Ali Mardan Khan tomb were a few tailoring shops, a stationery store, a printing press, general stores and a factory. The smaller structures included a water tank and the office of Controller General Stores. On the south of Mughalpura Road, only a part of the Engine Shed shop along with its office and an electric shop have been shown. Also, there are three large water reservoirs which can be seen south of the Engine Shed. The most important landmark of the area is a chimney of Power House which still dominate the northern Lahore.

On the eastern side of Wheatman Road but close to G. T. Road

was the Mughalpura industrial settlement. These were workers' quarters constructed by the Railway authorities. On the south of this housing settlement but close to Mughalpura Road, there was another set of houses for the workers. On the eastern side lay Islamia School. The rest of the area had numerous kilns.

Lahore and Environs (1926) Survey Sheet No. 12 (page overleaf)

Superintendent Office Locomotive Workshop (top)

Aerial view of Locomotive and Engine Shop (1925) (bottom)

These workshops employed a large number of workers as well as professionals. The locomotive shops employed about 5,000 men by 1926; the carriage shop employed about 5,600 men bringing the total number of employees of the workshop complex over 10,000. In 1928, out of 51,613 people employed in factories in the province of Punjab 13,624, or roughly one in four, were engaged in the railway workshop.

74° 21' E. 1950 — Continuation Sheet No 11 — E. 1900

31° 35'

Continuation Sheet No. 8

Isolation Hospital

Oera Kumma Singh

Ry stores

Cemetery

Begumpura

Clerks' qrs

Junior Students' hostel

Senior Students' hostel

Professors' qrs

MACLAGAN ENGINEERING COLLEGE

Principal's bungalow

RIFLE RANGE

V H GARHI SHAHU WARD
V M

Factory

General stores

Stationary stores

Printing press

Engine shed

Reservoir

Reservoir

Water tank

Turn table

Loco Audit office

Boiler shop

Machine shop

Store

Smiths

Head office Carriage shop

Ry qrs

V H GARHI SHAHU WARD
V M

31° 34'

LAHORE & ENVIRONS

Survey No. 1316 E.D.P. 152615 D.C.S.I.-100

SYMBOLS AND ABBREVIATIONS

Municipal boundary with pillars

Ward boundary

Hindu ward No. 1 (Inside city) — I H

Muhammadan ward No. 1 (Inside city) — I M

Hindu ward No. 1 with name (outside city) — I H

Muhammadan ward No. 1 with name (outside city) — I M — SHISH MAHAL WARD

Metalled road with mile stone

Unmetalled road

Cart track

Camel path

Mule path

Foot path

Hedge

Railway, broad gauge (5' 6") single line

Wire fence, railing or palisade

Contours

Scale 16

Feet 100 0 500

Contour

E. 1950

E. 2000 Chains

74 23
31
35

8
2300

E.
2250

MUGHALPURA INDUSTRIAL SETTLEMENT

Islamia school

Kiln

Reservoir

SHEET No. 12

81
32

Embankment
Limits of cultivation
Contours and form lines
Canal and distributary
Bench mark of the Process Levelling
Other Bench mark
Well, masonry lined
Water trough
Reservoir
Chronometric height
Relative height
Latrine
Hydrant
Covered in passage

Lahore and Environs (1926): Survey Sheet No. 13

The area between G.T. Road and Mayo Road remained largely open till the British period. The British chose this area for the expansion of railway and construction of workshops to repair carriages and locomotive engines. This map covers an area stretching from Mughalpura Road to Bari Doab Canal and shows that the entire area had been allocated and planned for such purpose. The canal, as can be seen here, ran in an arc starting from the Shalamar Road in the northeast to the junction of the canal and Mayo Road in the southwest.

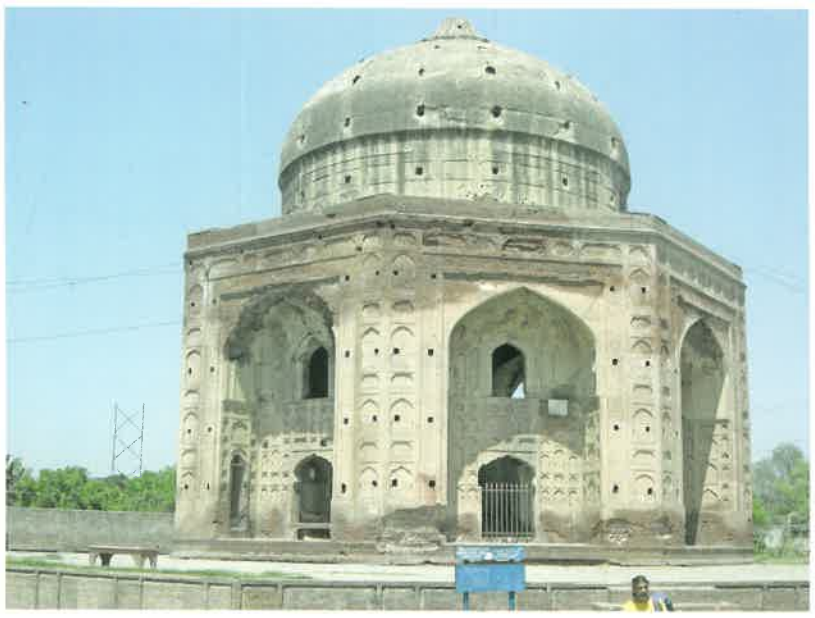
Lahore and Environs (1926) Survey Sheet No. 13 (opposite page)

Sanitary Road (top right)

Mayo Garden main road (top left)

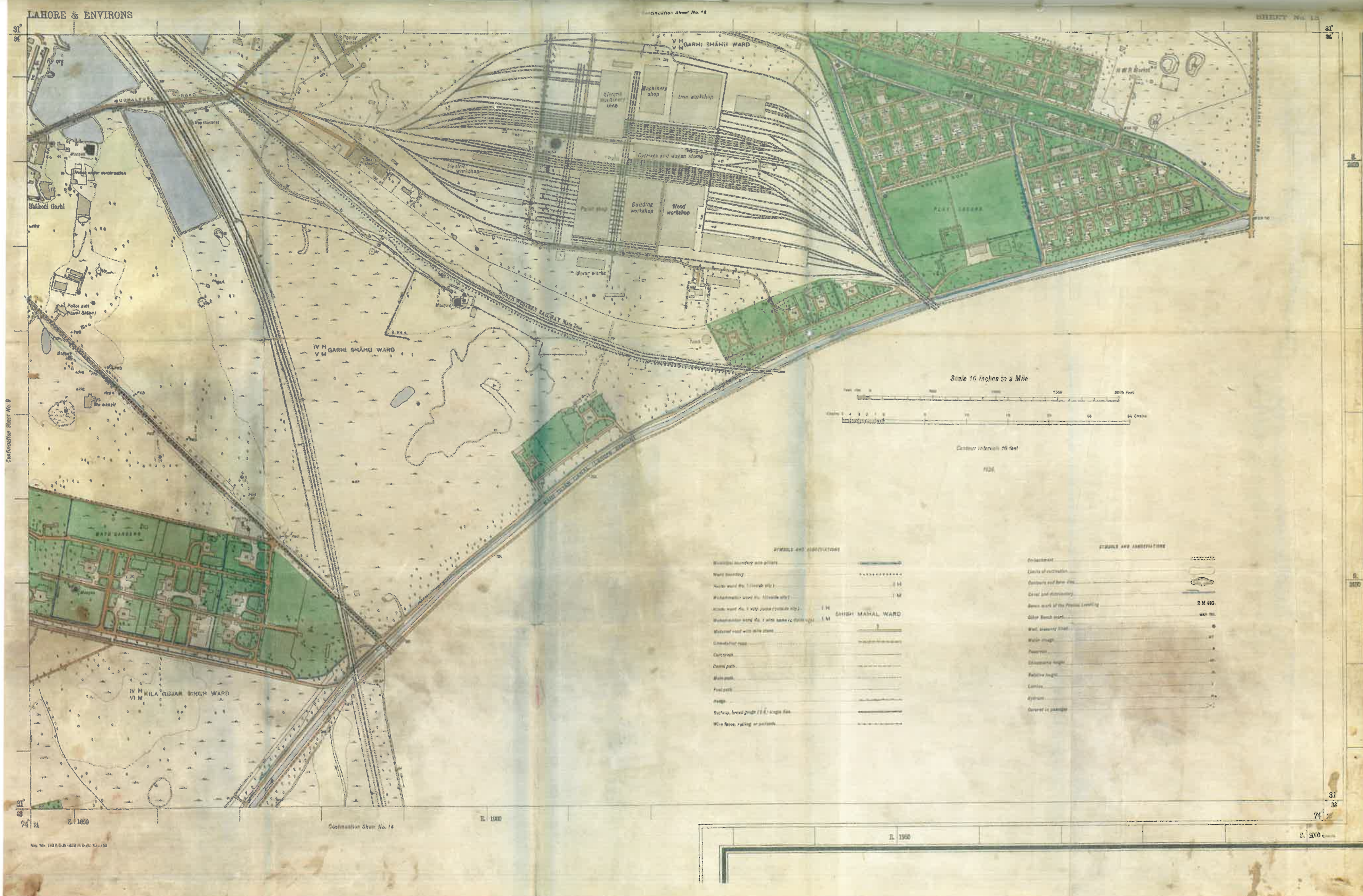
Kos Minar at Garhi Shahu (bottom left)

Tomb of Bahadur Khan (bottom right)



The major development that took place was the housing for railway officers on the extreme east adjacent to Mughalpura and Mayo Garden in the south-west. The central area in the north was occupied by the Loco Workshops. The main structures that dominated the area were a paint shop, a wood workshop, a building workshop, an iron workshop, an electric machinery shop and a machinery shop.

There were a number of historic monuments located within the area. These included a *mazar* of Nusrat Khan, built during the reign of Shah Jahan/Aurangzeb and a mosque within the workshop area; a *kos minar* near Garhi Shahu on Lahore-Karachi railway line and the tomb of Bahadur Khan on the Lahore-Amritsar main railway line near the canal.



LAHORE & ENVIRONS
SHEET No. 13
Continuation Sheet No. 12
Continuation Sheet No. 9
Continuation Sheet No. 14
V H GARHI SHĀHU WARD V M
IV H GARHI SHĀHU WARD V M
IV H KILA GUJAR SINGH WARD VI M
Electric machinery shop
Machinery shop
Iron workshop
Carriage and wagon stores
Electric workshop
Paint shop
Building workshop
Wood workshop
Motor works
NORTH WESTERN RAILWAY Main Line
Shāhodi Garhi
MUGHALPURA ROAD
N W R Buster
PLAY GROUND
Scale 16 Inches to a Mile
Contour interval 10 feet
1926
SYMBOLS AND ABBREVIATIONS
SHISH MAHAL WARD
B M 410
E. 1850
E. 1900
E. 1950
E. 2000

Lahore's Densely Populated Area (1926): Sheet No. 1

At the time when the survey sheets about Lahore and its environment were being prepared, a set of detailed maps was simultaneously published covering areas within the immediate surroundings of the Walled City. These maps gave details of the complete urban landscape character of the densely populated area. The area was covered from south and west with "Circular Garden". This sheet shows details of the residential areas on both sides of Bhati Gate Bazaar. The bazaar was relatively straight with little deviation on either side. It was divided into three parts depending on the specialization in the respective area. The first segment close to Bhati Gate was Bhati Gate Bazaar, the middle segment was Lakar Mandi and the final or northern segment was Bazaar Hakiman. The streets were narrow, winding and meandered in every direction. From the continuous or longer streets emerged cul-de-sacs or dead-end streets. These streets maintained a uniform width throughout or ended in a fairly wide urban space.

Bhatti Gate, Lahore (top left)

Grave of Faqir Aziz ud Din, Prime Minister of Maharaja Ranjit Singh, Bazaar e Hakeeman, Lahore (top right)

Bazaar e Hakeem, Lahore (bottom)

Lahore Densely Populated Area (1926) Survey Sheet No. 1 (opposite page)

LAHORE (DENSELY POPULATED AREA)

SHEET No. 1

Lahore Densely Populated Area (1926): Sheet No. 2

Lahore Densely Populated Area (1926) Survey Sheet No. 2 (opposite page)

Covernment College Lahore, Main Building (bottom left)

Punjab University Senate Hall (bottom right)

The area was bordered by Lower Mall in the west, Kutcheri Road in the south, and Circular Road in the north and had the buildings of Government College (founded 1864, shifted to present premises in 1871), Law (1868) and Oriental College (1865), Changar Mohalla, Paisa Akhbar and the Ghulab Singh Printing Press alongside it. Changar Mohalla and Paisa Akhbar Street were pre-colonial settlements while Government College (1864) Oriental College, area north of Mian Lal Road (presently Urdu Bazaar Road) and areas adjacent to Lower Mall were developed during the early British period. The college campuses of the British period were designed around open lawns. The buildings were scattered without a formal layout whereas Changar Mohalla was dense and a compact settlement with frequent open spaces provided within the residential area. The most important element within the urban fabric was Anarkali Bazaar which contained a variety of buildings such as hotels, sarais, mandirs and mosques. Setla mandir still dominated the skyline. The area on the west of Anarkali Bazaar contained Gawala Colony and a mix of *katcha* and *pucca* houses. The physical form and visual appearance of the area has been described by Patrick Geddes (1966: 33) in the following words:

"We now come to Anarkali, as the one great axial thoroughfare extending southward from the Old City. Its width, though great in comparison with the old thoroughfares inside the gates, is already insufficient for its traffic, while its architectural effect is also unworthy of its situation, as the ever importantly High Street of Lahore.....Also with this main thoroughfare should be cleared up the districts to east and west alike. Thus, we should disentangle the University and Hospital quarters which lie on either hand, from the crowded, irregular and often insanitary areas of minor streets and lanes on each side."

The area on the western side of Anarkali Bazaar had mix land-uses comprising residential, educational and commercial activities and therefore, there was a sharp contrast in the outlook and image of the urban environment. The area, known as Takia Imli Wala, was best described by Patrick Geddes (1966: 23) in the following words:

> "Here I am given a plan of a small district east of Anarkali besides the roads of Changar Mohalla (West, not East). This place had a bad record from the sanitary point of view, an excessive death-rate. It is of low valuation, being mostly katcha houses, and very poor at that. Yet there is a large central sacred area, fairly well kept as things at present go; and with the open space for play ground outside. Let this latter be preserved, with something of the same respect for the living which we as yet show only to the dead.... Three minutes' walk to the south, we enter the spacious and healthy College quarter, with its professors and students; and among these are a considerable number concerned with the study of economics..."

CIRCULAR ROAD

CITY

MOHALLA MIANAN

RANDA NALA

Temple

CIRCULAR ROAD

LOWER MALL ROAD

Kashmir Primary school

S.P.S.K. High

Police post No. 1 Lahore

M. Gulab Singh's Primary school

D.A.V. Industrial school

Mosque

Mosque with tank

Flower gardens

GOVT. COLLEGE

Boarding house

Hockey ground

KUTCHERI ROAD

Chemical Laboratory

Oriental College

Law College

KUTCHERI ROAD

Telegraph compound

Civil Surgeon's office

Civil Dispensary

Punjab Central press

ANARKALI BAZAR

31

84 15 / 74 18 20

Reg No. 183 E D.O 1934 C.D.O 17 I. 105

E. 183
Continu... Sheet No. 3

74

SYMBOLS AND ABBREVIATIONS.

Metalled road with mile stn		Other Bench mark	
Unmetalled road		Well, masonry lined	
Water		Water trough	
Wire fence, railing or palis		Boundary	
Embankment		Railway bridge	
Limits of cultivation		Latrine	
Cane or reed boundary		Hydrant	
Bench mark (Trig. Primary)		Culverts or drainage	

Scale 100 feet to 1 inch

Lahore Densely Populated Area (1926): Sheet No. 3

This sheet covers the area around Anarkali Bazaar from Kutcheri Road in the north and provides details of streets and buildings on the eastern side of Anarkali Bazaar. After crossing The Mall, it continues towards south up to Nabha Road on the eastern side and Church Road on the western side and covers the area of Dhobi Mandi. At this point, Anarkali Bazaar ends and Lake Road continues towards south up to Lodge Road. The map ends at Daulat Ram Street.

Lahore Densely Populated Area (1926) Sheet No. 3 (opposite page)

The area between Kutcheri Road and The Mall was divided into east-west streets running parallel to each other with occasional north-south streets in the middle of the settlement. The northern part contained one large and a small mosque. The middle part of the settlement seemed to have been dominated by the Hindu community which can be easily inferred by the existence of two *mandirs* and a Gali Mahi Lal (street which appears to be dominated by Hindu community). On the extreme southern side of settlements lay Md. Naqi Road which ran parallel to The Mall on its northern side.

The Mall traversed the site gently in a slightly curvilinear fashion. It had service roads on both ends with green spaces in between the service roads and the main boulevard. The southern side was well landscaped with a fountain at its western end. The southern service road used to be called Albert Road.

Buildings of Dhobi Mandi facing Anarkali (bottom left)

Streetscape of Dhobi Mandi (bottom right)

Dhobi Mandi area was divided into east-west and north-south streets. The area contained two *ziarats*, one temple and a mosque. A fairly wide Karam Chand Road (just north of Nabha Road) connected Anarkali Bazaar in the west with Mclagan Road in the east. The beauty of the street was the location of the temple with fairly wide open spaces on either side of it. The most outstanding aspect of its physical design was the element of surprise created with the occurrence of varying widths of streets and urban spaces which came across unexpectedly at various locations. In this way, the light and the shade and different volumes of urban spaces made it a more refreshing environment.

The final segment of this map shows an area located west of Lake Road up to Lodge Road. The settlement was divided into north-south streets with three-storied buildings.

DENSELY POPULATED AREA

Continue Sheet No. 2

SHEET No. 3

SYMBOLS AND ABBREVIATIONS.

Metalled road with mile stone		Other Bench mark	
Unmetalled road		Well, masonry lined	
Path		Water trough	
Wire fence, railing or palisade		Reservoir	
Embankment		Railway Height	
Limits of cultivation		Latrine	
Canal and distributary		Hydrant	
Bench mark of the Fraser Levelling	FBM 705	Covered drainage	
		Flowing (perennial) permanent: temporary	

Scale 100 feet to 1 inch

Links 100 ... 7 Chains

Feet 100 ... 500 Feet

1926.

KUTCHERI ROAD

BAZAR

ANARKALI

GALI MAHL LAL

UPPER MALL ROAD

DEGBI MANDI

MACLAGAN ROAD

NASHA ROAD

Continued Sheet No. 4

Lahore Densely Populated Area (1926): Sheet No. 7

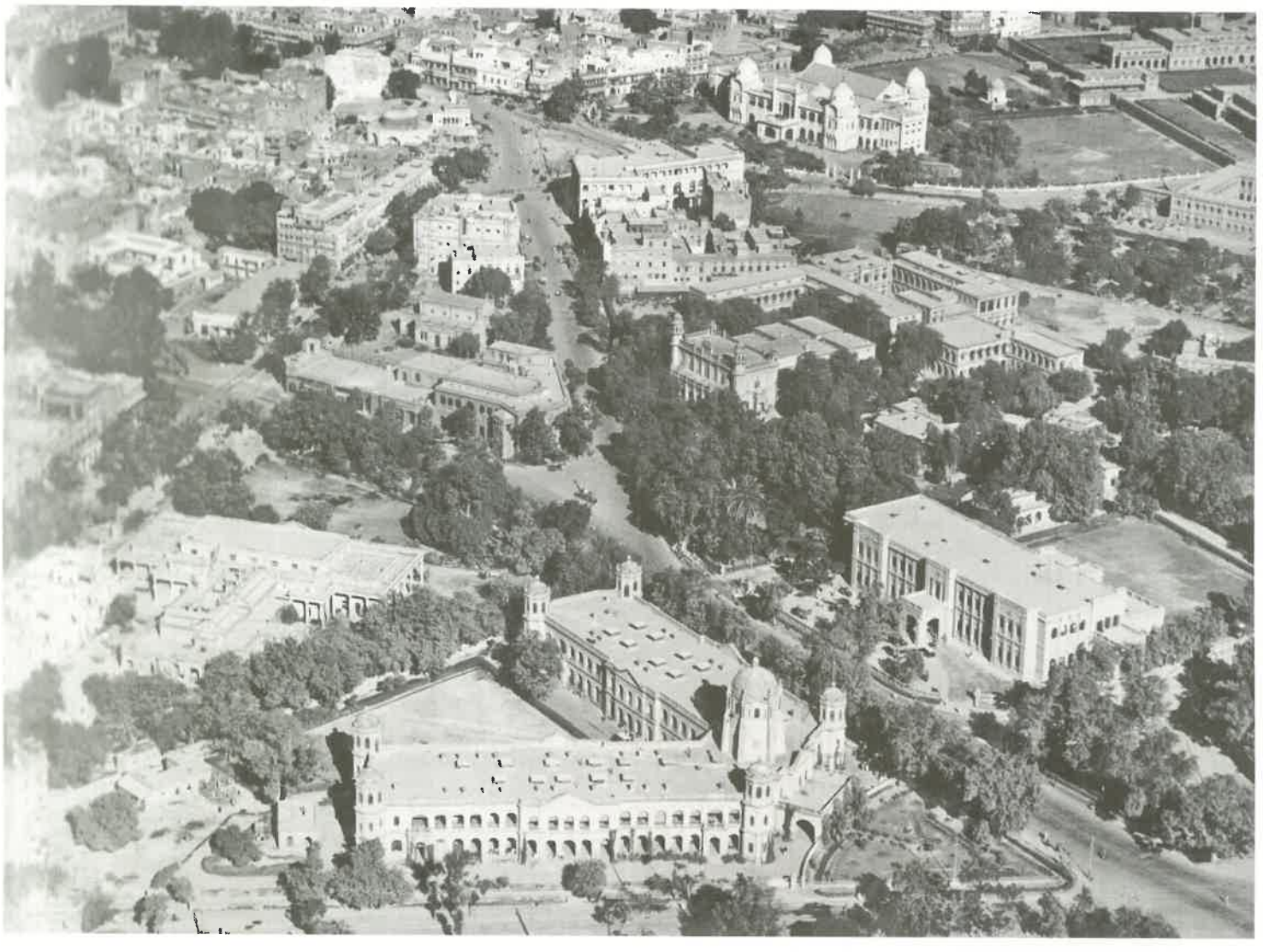
This map gives details of the areas located between Nisbat Road, Mclagan Road, McLeod Road and Nabha Road. The plan shows a strong relationship between architecture and physical planning. The intersection of roads and the accompanying building forms have been carefully designed to face urban spaces, thus creating powerful vistas and enforcing a strong visual character. Every urban square carries a strong sense of enclosure created by structures around it. The Ewing Hall of F.C. College (founded in 1864) and the Patiala block of King Edward Medical College were designed to face the King Edward Square. The Central Bank of India office faced towards an urban space sporting the King Edward statue. Similarly the General Post Office and the Telegraph Office generated a strong urban space on The Mall. YMCA and Masjid (Dai Lado), which was located on the Y-junction, was designed on the architectural axis of The Mall and Ratan Chand Road.

Lahore Densely Populated Area (1926) Sheet No. 7 (opposite page)

Aerial view of Bank Square and King Edward Square (bottom)

King Edward Square was enclosed by Forman Christian College in its east, Patiala Block of King Edward Medical College in the north and Bank of India in the south. Forman Christian College was one of the most prestigious institutions of its time and still bears its significance to this day. It was founded in 1864 by Dr. Charles W. Forman, a Presbyterian missionary from the USA. Initially known as Lahore Mission College, it was renamed Forman Christian College in 1894 in the honor of its founder. There were four buildings on the campus by 1916. The majestic Ewing Hall which was built in 1916 is still being used as a hostel. The college was shifted to its present premises in 1940. The college produced serious scholars, researchers and scientists. One of Forman's faculty members, and Professor of the college also fostered the work of a Nobel Laureate, Dr. Arthur Compton, who won the Nobel Prize for physics in 1927.

The construction density as can be seen from the map was uniform and this was achieved with a balanced relationship between solid and void. The green spaces in front of the buildings, between the buildings, and the gardens along the roads made it appear closer to nature. The walking experience afforded by the footpaths must have been really pleasing. Ratan Bagh and attached flower garden on Ratan Chand Road, a vegetable garden on Thornton Road and a graveyard on Napier Road, open spaces on both sides of The Mall with its junction with Roberts Road contributed significantly towards a softer image of the overall built environment. Similarly open spaces in front of the Abbey on Napier Road and adjacent to Divinity College (opened November 21, 1870) made these buildings stand out in the built environment.



LAHORE (CHIEFLY SUPPLIED AREA)

SHEET No.7

Scale 400 feet to 1 inch

Lahore Densely Populated Area (1926): Sheet No. 9

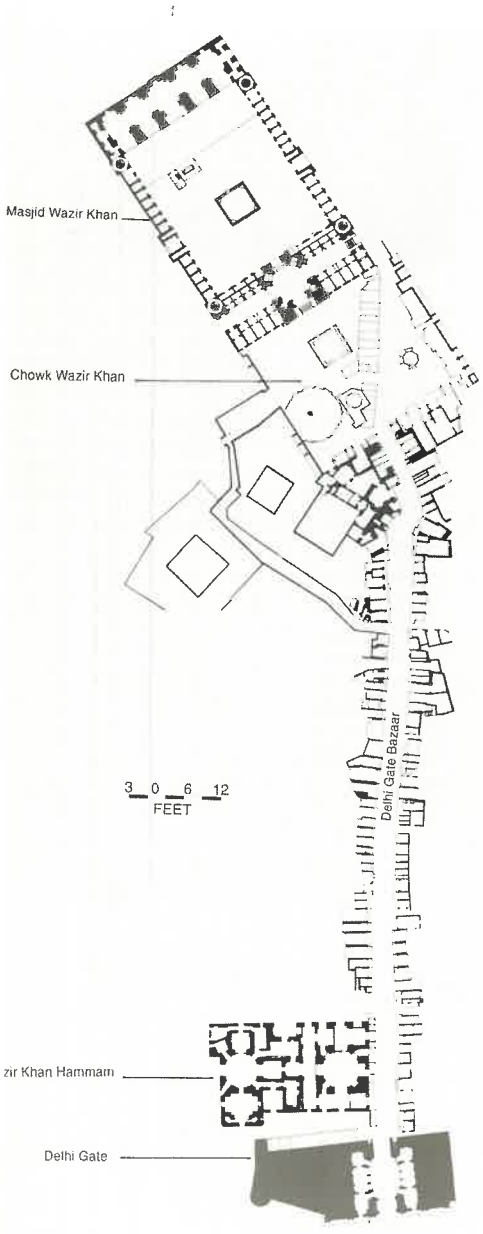
The area on both sides of Delhi Gate Bazaar (From Delhi Gate to Masjid Wazir Khan) and Kashmir Bazaar (From Masjid Wazir Khan to Dabbi Bazaar) was most significant in the Walled City. Delhi Gate used to be the principal entrance to the city while approaching from Delhi along Grand Trunk Road. This area used to be an open space at the time Emperor Akbar enclosed the city with a double defensive wall. The southern side used to be a *Rarra Maidan* where an open market was held. This map covers areas located mostly on the eastern side of the Walled City up to Papal Vehra adjacent to Tavela Nawab Sahib in the south to Dabbi Bazaar in the middle to Kashmiri Gate in the north. The Municipal Garden (Circular Garden) encircled the Walled City from both northern and eastern sides. Also, a part of the area on either side of Landa Bazaar can also be seen on the map.

Dehli Gate Bazaar (bottom)

Lahore Densely Populated Area (1926) Sheet No. 9 (opposite page)

The Walled City had its own spatial structure. Principal thoroughfares or *bazaars* connected one gate with another or joined one another at a chowk. Usually, a *bazaar* originating from some particular gate ran straight up to a certain point from where it branched off into several smaller *bazaars* or *kuchas* and joined other bazaars at different locations originating from other gates. In this way, the entire Walled City was subdivided into mohallas, each specializing either because of caste, geographical origin or profession. Every *mohalla* had its own principal street meandering from one end to another. These streets were never straight but maintained visual privacy of the *mohalla*. From these principal streets narrow dead-end alleys originated and provided access to different parts of the *mohalla*. The narrow dead end streets were highly personal and private. There were hosts of surprises at every corner and moment in terms of architectural form or position of religious buildings.

Delhi Gate bazaar was developed by Hakim Ilm ud Din Wazir Khan in 1044 AH (1644 AD), governor of the Lahore *suba,* during the reign of Shah Jahan. It was one of the most prestigious urban design projects undertaken during the Mughal period in the Walled City. The project began from Delhi Gate, the principal entrance to the city. The wall built by emperor Akbar, was subsequently replaced with another one by the Sikhs. The Sikh period wall along with the city gates was demolished by the British soon after their occupation of Punjab and new gates were built in their place. After crossing the British period Delhi gateway one could find Wazir Khan's *Hammam* on the southern side while there used to be a *sarai* on the northern side. It was the largest Mughal period *hammam* in Pakistan featuring fine specimens of fresco painting and a hydraulic system from the Shah Jahan period. From Delhi Gate, the bazaar leading towards the mosque had shops on the ground floor and retiring rooms on the first floor, with protruding *jharokas* and interplay of *bukharchas*. The bazaar took a slight turn in the middle and led one to *Chitta darwaza* beyond which was the forecourt of the mosque. The grand square was symmetrical in design with a monumental entrance portal of the mosque on its western side decorated with enameled mosaic tiles and brick imitation work. Masjid Wazir Khan was the chief ornament of the project and the city of Lahore. It is the best specimen for studying art and architecture of the Mughal period.



SHERANWALA GATE

PAKISTAN CLOTH MARKET

SHEET No 9

Lahore Densely Populated Area (1926): Sheet No. 12

This map covers an area situated east of Zaki or Yakki Gate and southwest of Circular Road and northeast of Landa Bazaar. The small linear settlement had flourished along the northeast-southwest direction. By year 1926, there were two arms of development with open spaces between both. Both had narrow winding lanes with dead end streets. During the Mughal period it was located north of Nolakha where Mirza Kamran, brother of Humayun, is said to have built a garden. Mohalla Dara Shikoh was built by Dara Shikoh, brother of Aurangzeb, during the reign of Shah Jahan. The settlement had a large square with a prosperous market. A variety of articles were bought and sold at this point. Dara Shikoh also built a large mansion here. After the decline of Mughal rule, the Sikh plundered the entire settlement and turned it into a ruin. The bricks were taken from the site for construction of other buildings. With the arrival of the British, Muhammad Sultan, the contractor of Railway Station and owner of the *sarai,* demolished the mosque to acquire more bricks. The settlement was reduced to carry ordinary houses as compared to the earlier spacious structures with elaborate basements. Today only a few ordinary houses of no particular architectural value remain. The settlement was comprised of narrow winding lanes.

Lahore Densely Populated ARea (1926) Sheet No. 12 (opposite page)

Tomb of Sheikh Kaku Chishti, Bazaar Nolakha (below left)

Gurudwara (below right)

Bazaar Nolakha (bottom Left & right)

E. 1760 Copies

SYMBOLS AND ABBREVIATIONS

Bridle road path or footway		Other Bench mark	B.M. No.
Unmetalled road		Well, masonry open	O
Hedge		Water trough	W.T.
Fire fence, railing or palisade		Reservoir	R
Embankment		Railway bridge	R.B.
Limits of cultivation		Latrine	L
Canal and distributary		Outhouse	O.H.
Bench mark Also Precise Levelling	B.M. 705.	Caravan in passage	
		Thanas (police-station) permanent, temporary	

Scale 100 feet to 1 inch

Yards 100 50 0 1 2 3 4 5 6 7 Chains

Feet 0 75 50 25 0 100 200 300 400 500 Feet

1926.

CIRCULAR GARHA WALA ROAD

CIRCULAR

Outfall pipe

ROAD

Temple

GRAND TRUNK ROAD

Mosque

Mosque

Mosque

Ahlem Chisti's compound

Sarai Sultan

Continued on Sheet No. 15

LAHORE (DENSELY POPULATED AREA)

SHEET No.

Lahore Densely Populated Area (1926): Sheet No. 14

This map provides details of pre-colonial settlement of Kila Gujar Singh located on the south of the junction of Nicholson Road and McLeod Road. It used to be a stronghold of Gujar Singh, an important ruler of this part of Lahore after the death of Maharaja Ranjit Singh. The physical planning of the settlement was based on the organic or natural order. The width of the streets varied throughout the entire length along with frequent urban spaces. These variations in street widths and the heights of buildings created dramatic effects of shade and shadows along with visual and psychological surprises. Public wells were planned in all urban spaces and at important locations within major streets. Similarly, mosques also found their place in the middle of these linear streets. From these streets emerged various cul-de-sacs.

The settlement had an independent *Nihalchand* Bazaar from where access to the settlement could only be achieved through Kucha Aiwianwala. This kind of arrangement provided a very quiet atmosphere within the built environment.

Kila Gujar Singh residential street (left)

Main Bazaar, Kila Gujar Singh (right)

Lahore Densely Populated Area (1926) Sheet No. 14 (opposite page)

LAHORE (DENSELY POPULATED AREA)

Continuation Sheet No. 13

SHEET No. 14

31 34 15

31 34 15

Continuation Sheet No. 11

FLEMING ROAD

MOHALLA WALI ALLAH

ROAD

NICHOLSON ROAD

McLEOD

FLEMING ROAD

Mosque

Old workshop

Mosque

Mosque

PWD BP

Rose Engineering works

NIHALCHAND MARG

Mosque

MOHALLA KHUDIWALA

MONTGOMERY ROAD

KILA GUJAR SINGH

Mosque

Mosque

Mosque

RAJ GALI

8.

2375

31 34 74 19 45

31 34 74 20

E. 1700 Chains

Reg. No. 183 F.D.D. 1928 (3 D.O.) E.I.-100

SYMBOLS AND ABBREVIATIONS.

- d road with mile stone
- lled road
- ace, railing or palisade
- ment
- f cultivation
- nd distributary
- ark of the Precise Levelling

3	Other Bench mark	
	Well, masonry lined	O
	Water trough	WT
	Reservoir	R
	Relative Height	
	Latrine	L
	Hydrant	H
BM 700.	Covered in passages	
	Thana (platforms) permanent; temporary	

Scale 100 feet to 1 inch

Links 100 50 0 1 2 3 4 5 6 7 Chains

Feet 100 75 50 25 0 100 200 300 400 500 Feet

1926.

Model Town Lahore (1932)

Model Town is one of the most outstanding examples of an ideal town built in the early years of 20th century on a co-operative basis in the Indian subcontinent. The idea of this scheme was the brainchild of Diwan Khem Chand, a lawyer based in Lahore. He published his idea in January 1921. "My scheme", he expressed, "is that within easy reach of Lahore, say within 6 or 7 miles of it, about 1,000 acres of agricultural or waste land be purchased, and on it be built a town with all the conveniences of modern times."

Shahdara was initially thought of as a possible site but due to its vulnerability to seasonal floods, an area on the southern side of Lahore was eventually considered appropriate. Khem Chand along with Sir Ganga Ram (an engineer, reformer and philanthropist) visited the site of Rakh Kot Lakhpat, located five miles southeast of Anarkali, and 'fell in love immediately'. The site was purchased at a cost of nine lakh rupees. A company was formed to register under the Cooperative Societies Act. On February 27, 1927, the first meeting of its founder members was held - each of whom was required to subscribe Rs. 100. The committee elected Ganga Ram as chairman and Khem Chand as its secretary. A preliminary committee comprising 21 persons was tasked with implementing the plan. The committee approved the name of Model Town till the time another suitable name could be worked out, however, the name continues to this day.

The progress on the scheme in the initial two years remained slow due to lack of necessary details in the proposed plan. With the floating of the scheme, the response was overwhelming. Four hundred copies of the plan were sent out with 184 individuals obtaining the forms and expressing their desire to build 200 houses. A design competition was advertised with prize money of Rs. 1,220 for the best scheme. Thirty two entries were received and displayed for public inspection on The Mall for a fortnight. The committee could not decide the order of the final four entries and, therefore, the prize money was divided amongst all four. The winner of the second prize was invited to combine the best features of all the plans into one. His final plan won the admiration of both members and the public.

The plan was square in shape. In the center of the town was a circular space provided for a "Hill, Lake and Garden." The circular road around the garden, a hundred feet wide and about half a mile in circumference was to house stores, markets, post office, boys and girls schools, a nursery, club, a hospital, etc. The idea was to keep all the public buildings in the center of the town. Khem Chand envisaged an allotment pattern of four kanals of land (1/2 acre) for A Type houses, two and a half for B Type, and one and a half kanals for C Type houses. He later wanted to double the entitlement but the Managing Committee of the Society decided otherwise and approved six kanals of lot land for A Type, four kanals for B Type and two kanals for C Type house. The first allotment was made in 1924. Ninety five percent of the plots were given to members while the remaining five percent were allotted to outsiders.

A set of practical and environmentally-friendly society byelaws was approved for the housing layout. The byelaws stipulated that there could only be one house per plot with two-thirds of the lot land remaining open for gardens and lawns. The builder could choose from a set of a hundred plans of predesigned houses, each combining the best features of Indian and European housing in conformity with the climate of Lahore. Many of them had been designed by the society's own architect M.C. Khanna. By 1930 more than half the houses had been constructed by the society.

The recommended material was bricks laid with cement sand mortar with roofs and lintels being made of reinforced brick concrete. The sewerage system was introduced according to the Kentucky pattern which functioned satisfactorily. For electricity, the Society relied upon its own generation and supplied it to the residents at the same rate as that of the rest of the city. The telephone rates were exorbitant; therefore, only six telephones were connected with the Lahore Exchange. The Post and Telegraph office was housed in an improvised building near the club. A library was started in a club in 1927. A site for cinema and a hotel with attached *Barat Ghar* (Wedding Hall) were reserved. Model Town faced serious transport problems in traveling to the main city, therefore from 1925 onwards, the Society maintained regular passenger transport between Model Town and Lahore.

In order to meet the daily food and dairy requirements, the Society proposed a dairy farm, a five-acre poultry yard, 220 acres of land for fruit growing, and six acres were reserved for a chil-

dren's nursery. The first school was started on an experimental basis for two years but the experiment gained success. Therefore in October 1929, the school was raised to high school standard. The most remarkable aspect of Model Town was how well various religious communities had been integrated together. Special funds were arranged to build a *mandir* for Hindus, a mosque for Muslims and a gurudwara for the Sikhs. The land provided for these buildings were given free of charge. A cremation ground was also set aside, and a graveyard planned.

Model Town achieved the mark of success and became an important settlement in the Indian subcontinent. In 1927 Bogle wrote, "In Lahore a garden city has recently been started by a cooperative society, and an area laid out for residential houses in an Endeavour to provide ideal homes; this 'Model Town' as it is called, has its first two byelaws, (1) That every house shall have a garden; (2) That of the total area of the plot not less than two third shall be garden and not more than one-third built over. No better rules can be imagined for ensuring a delightful residential area, cool attractive and healthy, and, where it is possible to enforce such rules, a municipality could not do better than adopt them."

Over the years, Model Town has undergone a dramatic change. From the original 184 members in 1920 with a population of less than 2,000, by 2002 the population of Model Town had grown to 70,000 plus. Gross commercialism has taken over and commercial setups have been allowed within residential houses.

Layout plan of Model Town, Lahore (page overleaf)

Typical residential buildings of Model Town, Lahore (bottom)

MODEL TOWN (LAHORE).

Scale 8" = 1 Mile.

A. Class Plots (6 Kanals)
1-20, 27-30, 36, 65-70, 73-102, 104-111, 113-124, 128, 129.

B. Class Plots (4 Kanals)
21-26, 31-35, 50, 63, 64, 71, 72, 103, 112, 130-138, 140, 141, 143, 144, 152-154, 156, 157, 125-127

C. Class Plots (2 Kanals)
37-49, 51-62, 139-142, 145-151, 155-158, 1 to 104 in Block J.

PRICE-/4/-

YARD.

SLAUGHTER HOUSE.

VEGETABLE GARDEN.

CREMATION GROUND.

ABLE STOCK.

GARDEN.

CEMETERY.

BLOCK E.

BLOCK D.

BLOCK C.

BLOCK B.

SHOPS

GIRL SCHOOL HOSTEL

CHILDREN NURSERY

LADIES CLUB.

PLACES OF AMUSEMENT

GARDEN.

SWIMMING TANK.

GARDEN

LIBRARY.

BROWN HALL

SPORTS CLUB.

POST OFFICE

FRUIT GARDEN.

JIWANHANA.

LAWN.

SHOPS

PETROL PUMP

GARDEN.

3518-0

TRUNK ROAD ART. NO 6

TO LAHORE

6 MILE.

MODEL TOWN DISTRIBUTORY

SIDCUP

LAHORE CANT.

SHABRA

DIRECTION OF PREVAILING WIND

SUMMER

WINTER

W

E

N

S

857

R CONSTRUCTION

260

7 MILES

METALLED 6 "

TALLED & TARRED 3 "

19 "

PLOTS SOLD & ALLOTTED

PRIVATE BUILDINGS CONSTRUCTED OR UNDER CONSTRUCTION

PLOTS ATTACHED TO PRIVATE BUILDINGS FOR GARDENS

PUBLIC BUILDINGS CONSTRUCTED OR UNDER CONSTRUCTION.

" " PROPOSED

" GARDENS

K.C. Van

CO-OPERATIVE MOL

DATE:- 14-2-34.

BY VANDYKE PROCESS AT

Lahore Map: 1931

This map was prepared by the Survey of India and was published by the Imperial Gazetteer of India. This map does not provide updated information on the actual development which took place in Lahore. For example, Krishan Nagar and Sant Nagar, the two important settlements of Lahore, planned in the twenties have not been shown in the map.

In the late twenties and at the time of the publishing of this map some important architectural contributions appeared in Lahore. For the first time, row houses were built on the rear side of Ganga Ram building. A wide road lined with trees and double-storey row houses on either side still provides a very serene environment. These were probably the earliest row houses built in Lahore during the British period. A verandah on the front on the ground floor provided additional depth to the streetscape with rooms at the back and a terrace on the first floor with projecting rooms at its corners adding to the overall aesthetic quality of the streetscape.

Lahore and Environs: 1931 (opposite page)

Detail of South facade of Ahmad Mansion (bottom left)

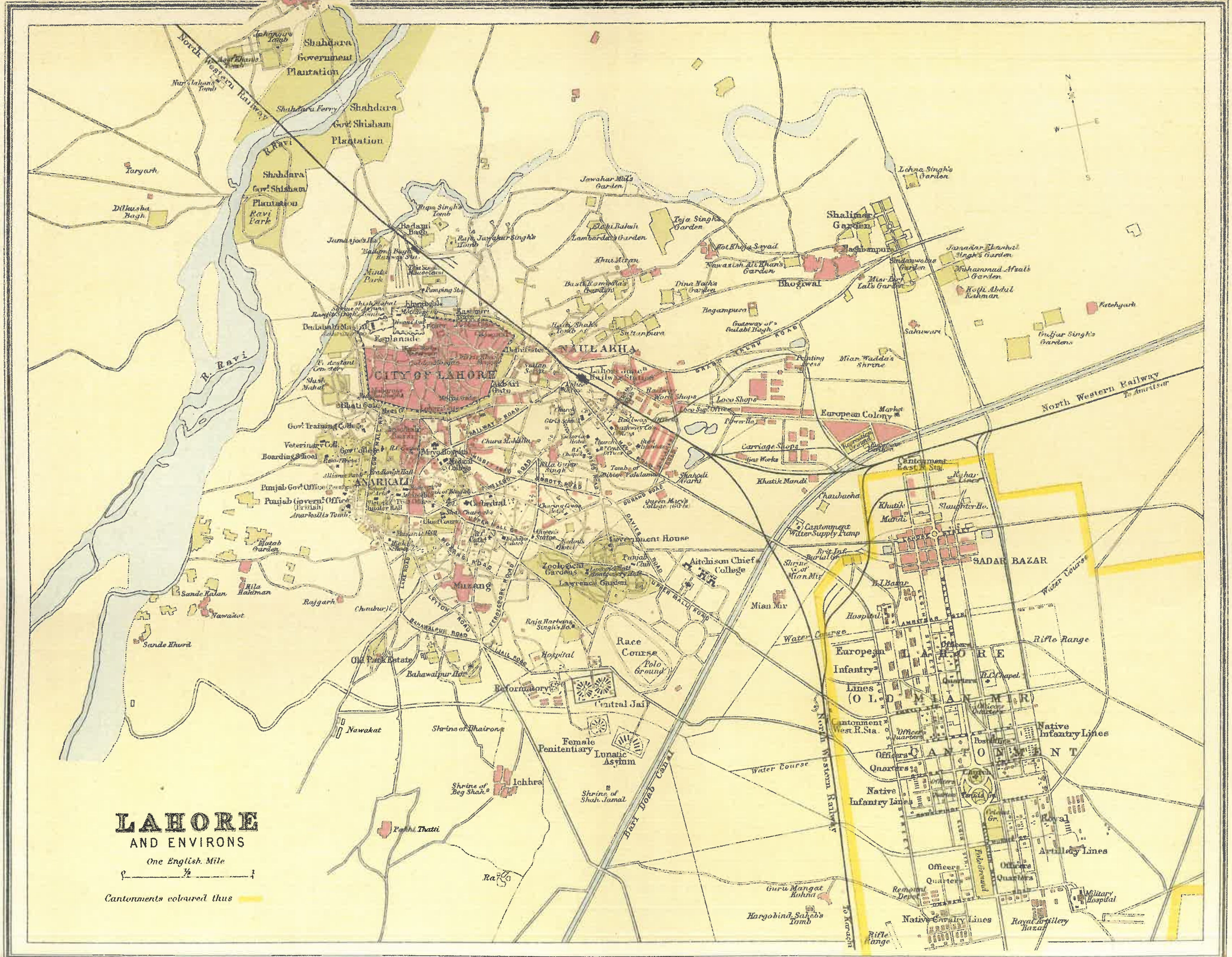
Bawa Dinga Singh building (bottom right)

During this time, Portland Cement had also begun to be used extensively in interior and exterior plastering and reinforced brickwork. In this regard, under the terms of an agreement of 27th June, 1922, the Punjab Government bought from Punjab Portland Cement Limited, no less than half of its requirements at a rate F.O.R (Free on Rail) Wah exclusive of bag. The cement brought about a significant change in architectural aesthetics. The shift from fair-face brick to plastered wall surfaces also changed the norms of detailing and architectural character. Most of the commercial buildings built on The Mall were witness to this change.

A large number of private buildings were built on The Mall. The Consulting Architect's Office not only undertook these private projects but also, at the request of the Government of India, designed public buildings for places other than Punjab. The British Legation Building at Kabul also got completed in 1927. The most important commercial buildings built on The Mall were Dinga Singh building, Dyal Singh Building, Ghulam Rasul Building and Shadi Lal Building (now Ahmad Mansion).

One of the most important decisions undertaken during 1925-26 was the handing over of Lahore Fort to the Archaeology Department. With this, important work comprising removal of later period walls, scrapping of plaster and removal of dust to uncover original marble tracery was commenced.

In the mid thirties, significant construction took place around Lahore Fort. The Dental College building was completed and work on the south wall of Lahore Fort was undertaken. It got completed during 1928-29. In addition, work on the erection of various types of fountains from carved stone basins to pools of old country bricks was initiated and it was assumed that this work would be completed by the end of 1930.


LAHORE
AND ENVIRONS
One English Mile
½
Cantonments coloured thus
Post Office
Shahdara
Shahdara Government Plantation
Shahdara Ferry
Shahdara Govt Shisham Plantation
Shahdara Govt Shisham Plantation
Ravi Park
R. Ravi
R. Ravi
North Western Railway
Taryarh
Dilkusha Bagh
Badami Bagh
Minto Park
Esplanade
CITY OF LAHORE
Akbari Gate
Bhati Gate
Mori Gate
Delhi Gate
Kashmiri Gate
NAULAKHA
Lahore Junction Railway Station
Loco Shops
European Colony
Carriage Shops
Gas Works
Khatik Mandi
Chaubacha
Govt Training College
Veterinary Coll.
Boarding School
Punjab Govt Office
ANARKALI
Cathedral
Mizang
Chauburji
Rajgarh
Rila Hakiman
Sande Kalan
Nawakot
Sande Khurd
Nawakot
Old Park Estate
Bahawalpur Ho.
Reformatory
Central Jail
Female Penitentiary
Lunatic Asylum
Shrine of Bhairon
Shrine of Beg Shah
Ichhra
Shrine of Shah Jamal
Pakki Thatti
Race Course
Polo Ground
Hospital
Zoological Gardens
Lawrence Garden
Punjab Club
Government House
Aitchison Chief College
Mian Mir
Bari Doab Canal
LAKE ROAD
LYTTON ROAD
FEROZEPORE ROAD
BAHAWALPUR ROAD
DAVIES ROAD
UPPER MALL ROAD
DURAND ROAD
GRAND TRUNK ROAD
Jawahar Mal's Garden
Teja Singh's Garden
Lambardar's Garden
Kot Khoja Sayad
Nawazish Ali Khan's Garden
Dina Nath's Garden
Bhogiwal
Begampura
Gateway of Gulabi Bagh
Shalimar Garden
Baghbanpura
Mian Wadda's Shrine
Lehna Singh's Garden
Jawahar Khushal Singh's Garden
Muhammad Afzal's Garden
Kotli Abdul Rahman
Fatehgarh
Gudjar Singh's Gardens
Sahuwari
Cantonment Water Supply Pump
Cantonment East R. Sta.
SADAR BAZAR
Slaughter Ho.
Water Course
Rifle Range
European Infantry Lines
LAHORE
(OLD MIAN MIR)
CANTONMENT
Cantonment West R. Sta.
Native Infantry Lines
Officers Quarters
Native Infantry Lines
Royal Artillery Lines
Military Hospital
Native Cavalry Lines
Royal Artillery Bazar
Remount Depot
Rifle Range
Polo Ground
Guru Mangat Kohna
Hargobind Saheb's Tomb
To Karachi
North Western Railway
To Amritsar
N
S
E
W

Lahore 1932

By the end of 1930, the colonial Lahore took its complete shape. Wide roads lined with trees, spacious urban squares enclosed by buildings and clock towers became important feature of the townscape. The road junctions on the Mall and Mcleod Roads were carefully designed as urban design scheme and furbished with public sculptures of important personalities. All these sculptures except the Alferd Woolner has now disappeared but the squares still provide grandiose effect in the recent urban congestion. The British officers and local elite used to live in spacious bungalows having front and back lawns while common man lived in courtyard houses planned in grid-iron street pattern. Simultaneously a large number of private housing schemes for middle income groups begin to emerge in every direction. The plans had to be approved from Lahore Improvement Trust before implementation. The different hierarchy of street pattern in these schemes showed a visible change in form from indigenous to new indigenous street pattern.

The commercial-cum-residential buildings on the Mall as well as bungalows followed the neoclassical style. However, local elements were also used in rare cases. Experiments were carried out in housing layouts. The row houses built by Sir Ganga Ram are considered to be a unique example of housing layout. Lahore being the provincial capital also housed mansions of Maharajas and nawabs of states located in or adjacent to Punjab province. The most important palatial houses in Lahore were Nabha house, Kapurthala house, Poonch house, Bahawalpur house, Farid Kot house and Chamba house and Jind house.

The landuse concept took a new shape in colonial Lahore. Churches began to dominate the skyline of almost every major road. In addition churches, clubs and institutes were built to facilitate the European community. Gymkhana Club, Robert Institute, Griffin Institute and Bert Institute were among such examples. For leisure activities of native public cinema houses were built in Bhatti Gate area, on the Mcleod Road and Abbot Road. However, Regal Cinema and Plaza cinemas were used by European elite.

The existing Bazaars continued to serve the traditional settlements. The different type of mandis in the walled city, Anarkali Bazaar, Mozang Bazaar and Baghbanpura Bazaar continued to flourish within the indigenous settlements. However, the specialized shops and stores for European elite and owned mostly by Europeans traders were planned on the either side of the Mall.

Another Development which took place at this time in the suburbs of Lahore was the establishment of the Lahore Flying Club at Walton. This facility was in easy reach of cantonment and Model Town. It was founded by a group of dedicated philanthropists initially named as "Northern India Flying Club". This was the first flying club established in Indo-Pak Sub Continent in 1932. At the time of partition, this organization would have been wound up but for the keen interest taken by some members it continued to operate. At the time of independence it was the major airport of the city. In 1950, the club was patronized by the PAF by sending their cadets for abinitio training. A new subsidy scheme was introduced in 1953 which entrusted the Club with the training of Commercial Pilots for Pak Air, Orient Airways and Crescent Air Transport. In 1954 all the three Airlines merged into Pakistan International Airlines but the Lahore Flying Club continued to train pilots for the National Carrier. Walton served as commercial flights until it was shifted to Lahore Cantonment near Bedian Road.

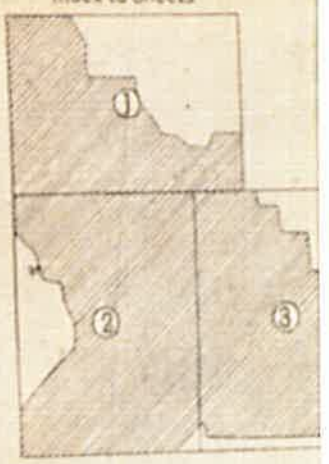
Poonch House (above)

Ganga Ram flats (below)

Map of Lahore 1932 (page overleaf)

Maya Ramwala
Graveyard
MINTO PARK
Bakhshi Bagh
Flour Mill
Goods Shed
Works
Wagon Works
Petrol Depot
Kerosine Depot
Wood Godown
Orphanage
Ludhewala
Ranjit Singh's Tomb
Kashmiri Gate
FORT
Kazuri Bagh
Mochi Gate
Shawalmar Garden
Bakhshi Mosque
Lohmanai Gate
Takyali Bagh
Hindu Cremation Ground
Takkali Gate
Ghanty Theatre
Hira Mandi
Municipal Dispensary
Cemetery
Tehsil
Chhina Singh High School
Water Works Road
Gt. Tr.
T.P.S.
TANK BED
C
I
T
Y
Girls School
Bhatti Gate
Islamia School
Slaughter House
Kashmiri Gate
Mochi Gate
Lahori Gate
Ajmeri Gate
Turkman Gate
Delhi Gate
ANARKALI BAZAR
MAYO HOSPITAL
Civil Hospital
Royal Engineers
College
Mosque
Convent
Bank
Hall
Court
Museum
Market
Town Hall
Tomb of Anarkali
Lakhewala
Ghaziwala
Hassan Dinwala
Amir Bakhtawala
Sohanwala
Imam Dinwala
Mahtamanwala
Dalliwala
Talianwala
Berwala
Chauthari Isawala
Kabul Khanwala
Ram Singhwala
Hathanwala
Punjab Govt. Press
Civil Lines
Police Station
Telegraph Office
Post Office
Dr. Atkinson
Mochi Gate
Lahori Gate
Ajmeri Gate
Turkman Gate
Delhi Gate
Civil Hospital
Royal Engineers
College
Convent
Bank
Hall
Court
Museum
Market
Town Hall
Tomb of Anarkali
Lakhewala
Ghaziwala
Hassan Dinwala
Amir Bakhtawala
Sohanwala
Imam Dinwala
Mahtamanwala
Dalliwala
Talianwala
Berwala
Chauthari Isawala
Kabul Khanwala
Ram Singhwala
Hathanwala
Punjab Govt. Press
Civil Lines
Police Station
Telegraph Office
Post Office
Dr. Atkinson

Index to Sheets



Sheet is devided into 1000 yards

Waziranpura

Leather Stores

Cotton Stores

Flour Mill

Dharmsala

SULTANPURA

Acid Factory

The Punjab Glass Works

Lands Sarai

RS

MOHALLA HAM GALI MOHALLA

Recreation Ground

Reservoir

N.W. RAILWAY

B E G A M

Plan of The Mall

Sir Ganga Ram Building (top)

Dyal Singh Mansion (middle)

Plan of The Mall by Basil M. Sullivan (bottom)

The first alignment of this finest public road was undertaken by Lieut. Colonel Napier, the civil Engineer in 1851. He described it as "a direct road from Anarkali to Mian Mir." Col. Napier submitted two estimates with alternate specifications for approval by the authorities on March 13, 1851. He was of the opinion that the cheaper design would be sufficiently durable. However the Board of Administration remarked that since this road would be "the great thoroughfare not only with Anarkali but also with the city, it would be more economical in the long run to sanction the higher estimates." (Goulding 1924: 30) The project was approved in April 1851. The Mall ultimately became the administrative, cultural, financial and educational heart of Lahore featuring the finest architectural landmarks of colonial architecture. The Mall Road was lined with shops of European trademen and private houses besides the important public as well as institutional buildings.

The Mall retained its alignment for a long time but substantial improvements were made by Basil M. Sullivan, the Consulting Architects of Government of the Punjab. The work was undertaken by Sir Ganga Ram, Executive Engineer in charge of Lahore Provincial Division, under the supervision of DuCane Smythe, chief engineer, who in turn was supervised by then Lieutenant Governor Sir Charles Rivaz. Goulding noted that major changes were done on the eastern side of Post Office Crossing. Both engineers took personal interest in its execution and according to Goulding, the chief engineer was even witnessed in kneeling position, measuring tape in hand. The Mall is the finest example of urban design done by Basil M. Sullivan.

Basil Martin Sullivan served as consulting architect to the Government of the Punjab from 1913-1938 and made significant architectural contributions and improvements in every part of the city. The map being discussed here was prepared under his supervision. Sullivan very well understood the importance of relationship between architecture and town planning and believed that the success of one profession is heavily dependent on another. Therefore, from 1924-26, a complete survey of Lahore was carried out by him in association with the Government of Punjab and the very first comprehensive conservation plan of the Walled City was prepared in 1929 under the title "A note for the use of the Lahore Improvement Trust Committee and of the Lahore Improvement Trust when formed, with special reference to the City of Lahore inside the walls." He also made significant improvements in the layout of Upper Mall and actually designed the Charing Cross, one of the best urban design projects in Lahore. This particular map gives detailed proposal of The Mall between General Post Office to State Guest House.

As a member of the Town Planning Institute in Britain, Mr. Basil M. Sullivan was deeply concerned with achieving a sustainable built environment and improving the townscape of Lahore by applying the principles of urban design. While presiding over a series of six lectures held in 1943 on the subject of town planning he stated that "town planning is very much, and has always been the concern of architects". His involvement in improving the urban design quality of The Mall, design of GOR-I Lahore and Civil Lines Sheikhupura proved his concern with the contextual and environmental design issues. While he was deeply involved in the expansion and remodeling of Governor's House, he also started working to improve the visual image of Lahore.

The Mall between Anarkali Bazaar and Edward Road (top)

Bawa Dinga Singh Building (middle)

The Mall, a principal thoroughfare of colonial Lahore, received his special attention. He improved the layout of squares and proposed urban design solutions for important junctions. In 1914, Charing Cross and an area between Anarkali Bazaar and McLagan Road were designed. Charing Cross, in particular, is an important square on The Mall and an outstanding example of urban design. The project started assuming its spatial character with the construction of Shah Din Building in 1914 and Masonic Lodge in 1917. These buildings defined the space on the southern end and Legislative Assembly building on its northern end with Pavilion of Queen Victoria in the middle. The buildings located on the southern side stand as a mirror image to each other on either side of Queen's Road. These buildings enclosed a semi-circular urban space and provided visual continuity and spatial harmony. Each of these buildings had monumental projected entrances placed in the middle of the colonnaded arcade. The verandah supported on Doric columns provided additional depth and created spaciousness in the physical environment.

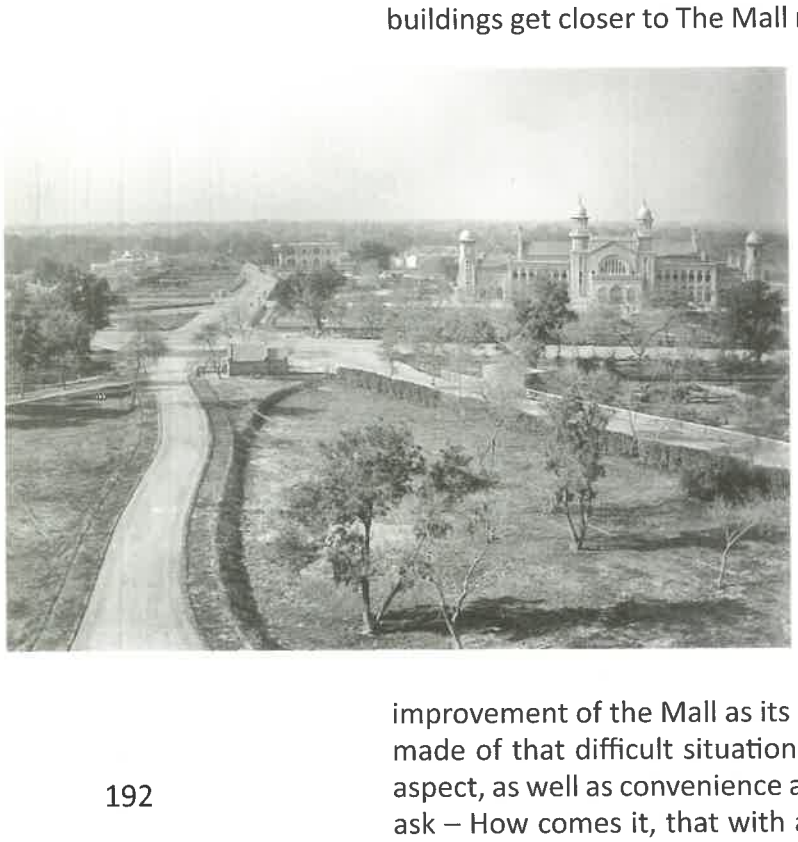
The intersection of the Charing Cross was in triangular form without having any visual experience. Sullivan made it a grand square by locating the Legislative Assembly building on the axis of Ferozepur Road (later Queen's Road and now Sharah-e-Fatima Jinnah). The two buildings came together in concave form making this space brilliant with sunshine, visually grand and axially balanced. While approaching from Regal Chowk, the buildings could be seen placed parallel to The Mall, flanking a grand space inspired from High Renaissance. It forms an element of surprise as well as a place of rejuvenation. While traveling on The Mall reaching the grand Charing Cross is psychologically an awe-inspiring experience. This realization and transformation of triangular space into a grand square was completed in 1915. Sullivan created a rectangular urban space in front of assembly chambers and a semi-circular space, punctuated by radiating nodes, to house flanking buildings making it a beautiful transition in the built environment.

The imposing Legislative Assembly building (1935-38) occupies the most prestigious location at the head of urban space overlooking Queen's Road. This stately complex of serene beauty occupies an area of 112 kanals. The longer east-west axis (358 ft) due to its podium and facade in yellow and red sandstone facing the square takes command of the enclosed space. The Assembly building, Shah Din building and Free Mason Hall make it one of the most successful urban spaces in Lahore.

High Court : 1900, Lahore (top)

High Court : 2012, Lahore (bottom)

Another urban space located between Mclagon Road and Anarkali Bazaar deserves a special mention. The space widens up on either side along the entire length but on the southern side, buildings get closer to The Mall near the Mclagon Road intersection. This experience of transition and change with greenbelts on either side of The Mall is quite refreshing.



Patrick Geddes visited Lahore in 1916 and prepared a report on the improvement of the city. Here he met with Basil Sullivan and recorded his opinion about his personality and architectural projects. Describing the personality of the architect, he stated: "I have found a warm ally in PWD. Architect, Sullivan, brother of illustrator of "Sartor" etc. and an old pupil and warm admirer and friend of Lanchester's: who is keen for me to tidy up the whole Punjab Towns, and is going to Government on that line! So instead of setting with headquarters in Lucknow, as I have been thinking, it may come to be Lahore."

He also admired Sullivan's contribution in the following words: "I am glad to find that improvements of some of the defects in the network of roads are already in active progress. Beginning with Charing Cross, I have nothing but approval of the new layout, and congratulate Mr. Sullivan accordingly. His improvement of the Mall as its crossing with Mclagan Road is also, I like it, the best that could be made of that difficult situation." He further stated that "While we are discussing the improved aspect, as well as convenience and safety, of the fine thoroughfare of Civil Station, one cannot but ask – How comes it, that with all this real interest in this fine modern city, and even pride – for instance , the improvement of the Charing Cross."

During 1930-31, a report was prepared giving the proposal for areas of compounds, type of buildings and setbacks for the Civil Station. An examination of the buildings on The Mall frontage showed that, on the whole, the Lahore Improvement Committee had succeeded in preventing encroachments in front of building lines. They had not, however, succeeded in preventing

unnecessary and unsightly petrol pumps, and other small structures from springing up in front of the shop. The main objective of the committee was (a) the general improvement of The Mall, (b) the properly considered layout of buildings and roads springing up between the Civil Station and Cantonment, (c) the proper upkeep of the area outside the King Edward Memorial hospital and finally (d) the definite laying down of a building frontage along both sides of The Mall.

The buildings on The Mall came up gradually but most were built during Sullivan's presence. Owing to the evident encroachments, it was mutually decided between the Municipality and The Trust that the application for buildings on this thoroughfare should be submitted to the Trust for examination and recommendations before sanction. It was stated that timely action had prevented encroachments and eyesores. Advertisement signs and billboards which are a perpetual urban plague were successfully handled. (26-27)

In 1915 the Government of the Punjab constituted a committee to discuss the improvement of existing properties on the Mall and to lay down byelaws regulating frontages and erection of future buildings. Consequently, a committee was nominated to formulate definite proposal (Government of the Punjab, Public Works Department, 1915-16: 7).

In front of the museum lies the famous Zamzama gun. This gun was used by Ahmad Shah in the battle of Panipat and left behind at Lahore, being too unwidely to take back to Kabul. This gun had been kept by the Sikh Misl, the Bhangis of Amritsar, till Ranjit Singh got possession of it in 1802. They called it the Bhangian-wali Top.

One of the beauties of the Colonial Lahore was the existence of a number of statues of prominent British and Indian personalities. These statues used to exist on The Mall but with the passage of time they were removed from the respective sites. In this regard, the role of architects had been very crucial from the selection of suitable sites to the designing of pedestals and landscaping of adjoining areas. Famous sculptors were hired to do the job. These monuments started appearing on the landscape of Lahore from 1887 and continued up to the end of Colonial rule.

The earliest statue of Lord John Lawrence was erected and unveiled on March 30, 1887 on The Mall in a small triangular garden located on eastern side of the Punjab High Court. The monument was erected to commemorate his services as a member of the Board of Administration and after its dissolution, as the first lieutenant governor of Punjab in 1859. The statue was cast by Sir Joseph E Boehm (1834-1890), sculptor-in-ordinary to Queen Victoria. The standing figure of Lord John Lawrence with a sword in one hand and a pen on the other once stood on a high pedestal. There used to be a wide platform all around the statue.

The beautiful monument of Sir Donald McLeod, (governor of Punjab from 1865-70) once stood on the old Mall, east of the Government Secretariat office. It was executed in marble, placed on a red sandstone pedestal, and was surrounded by an iron railing, the entrance to which was from the east. The following was the inscription on the monument: "In remembrance of one whom we loved. DONALD FRIELL McLEOD K.C.S.I., Lieutenant Governor of the Punjab, born 6th May 1800, died 28th November 1872. "The Lord Knoweth them that are His."

The most prominent statue of colonial administration was

Colonial Period Buildings on the Mall (top)

Free Masons Hall (middle)

Statue of Alfred Woolner (bottom)

the bronze statue of Queen Victoria. The statue was cast in London in 1900 by B. Mackennal before the Queen's death in January 1901. The Queen is shown wearing her Imperial crown on a veil of her Honiton lace, cradling the scepter and holding the orb. The marble pavilion protecting the statue had been designed by Bhai Ram Singh. When the design of the Charing Cross scheme was undertaken, it was proposed relocating the statue to a more appropriate location. The new scheme suggested locating it in the center of the open ground along the axis of the Assembly Chambers and providing trees and a pool of fountains on the open space to enhance the beauty of its surroundings.

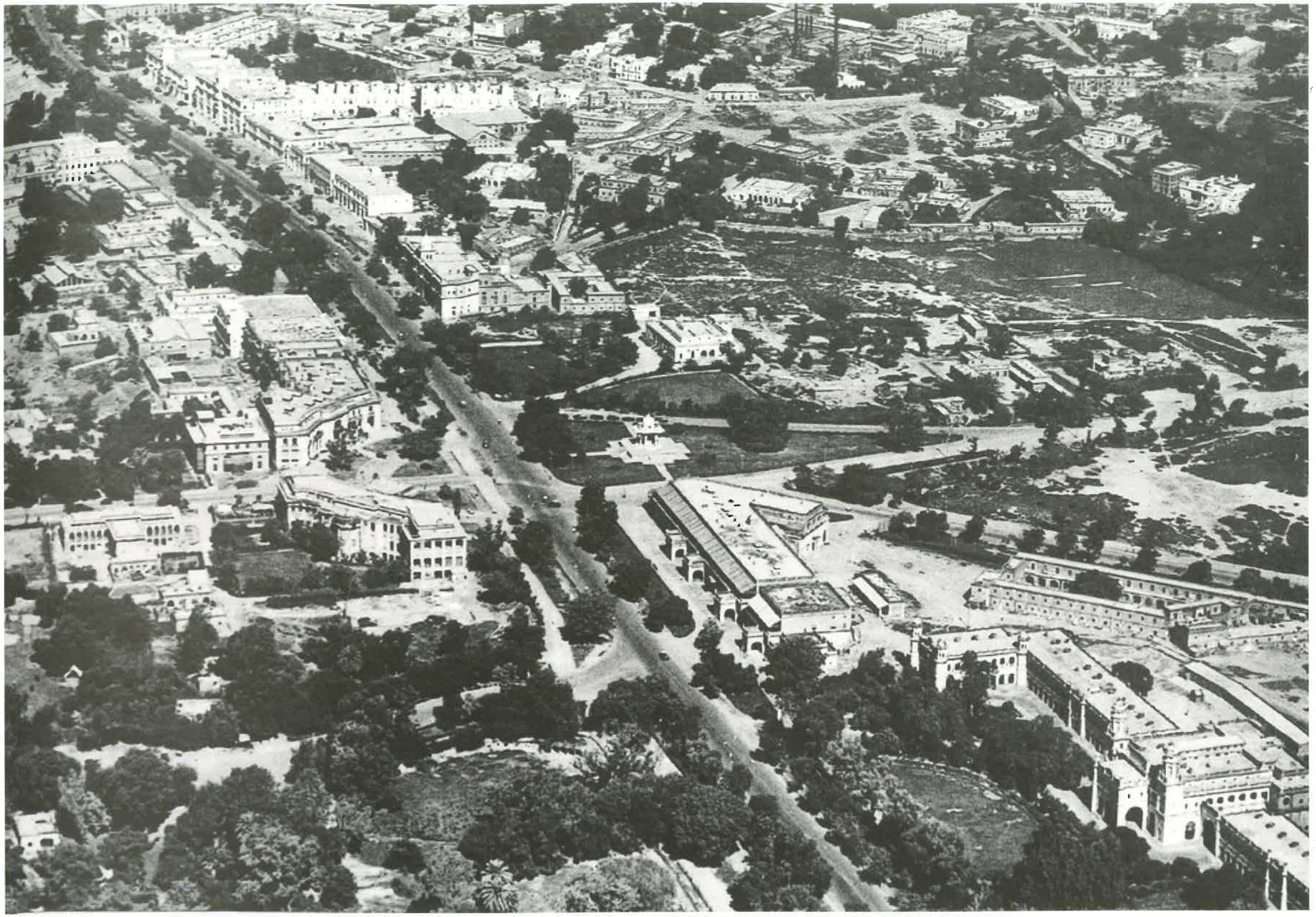
Aerial veiw of Charing Cross and The Mall (opposite page)

The statue of King Edward VII (r.1901-1910), in naval uniform, was erected some time around 1915. King Edward was shown looking towards the King Edward Square or Nila Gunbad Chowk. The monument was erected as part of the larger King Edward Memorial scheme. The statue rested on a pedestal sloping upward. The site was enclosed with bluster railing.

The Alfred Woolner (18878-1836) Memorial statue was designed and constructed by Gilbert Led Ward R. A. Sculptor, Pembroke Walk Studios (Kensington London), dated 27th may 1937. The monument rests on a five-foot tall pedestal executed in grey granite fine axed finish with grit-ted surface for the inscriptions. This only surviving statue can be seen standing on the pedestal, showing Alfred Woolner with a book in his right hand, wearing a suit and overcoat and a teacher's gown. The statue stands in front of Punjab University and bears the following inscriptions on its three sides. Left side bears "Professor of Sanskrit, and Principal of Oriental College from 1903 to 1936 and Dean of the university studies from 1920 to 1936." Inscription on the front bears, "Alfred Woolner, 1878 to 1936, a great and beloved leader." The inscription on the right bears, "C.I.E.M.A., D Litt F.A. S.B Officer D Acadmie Vice Chancellor of Punjab University from 1928 to 1936 and Registrar from 1903 to 1920."

A statue of Sir Ganga Ram (1851-1927) was erected on the northeastern corner of Lahore Museum. According to the 1939-40 report, a site plan showing the position of the statue, the dimension of the area required and the boundaries, together with complete details were prepared and supplied to the administration. Ganga Ram was a great engineer and had the honor of supervising the construction of important buildings and was also a great philanthropist, being the founder of Ganga Ram Trust Hospital.

The other important statues were of Sardar Dyal Singh Majithia (1848-1898) located on the Nisbat Road and Lala Lajpat Rai at Gol Bagh near Lahore Museum.

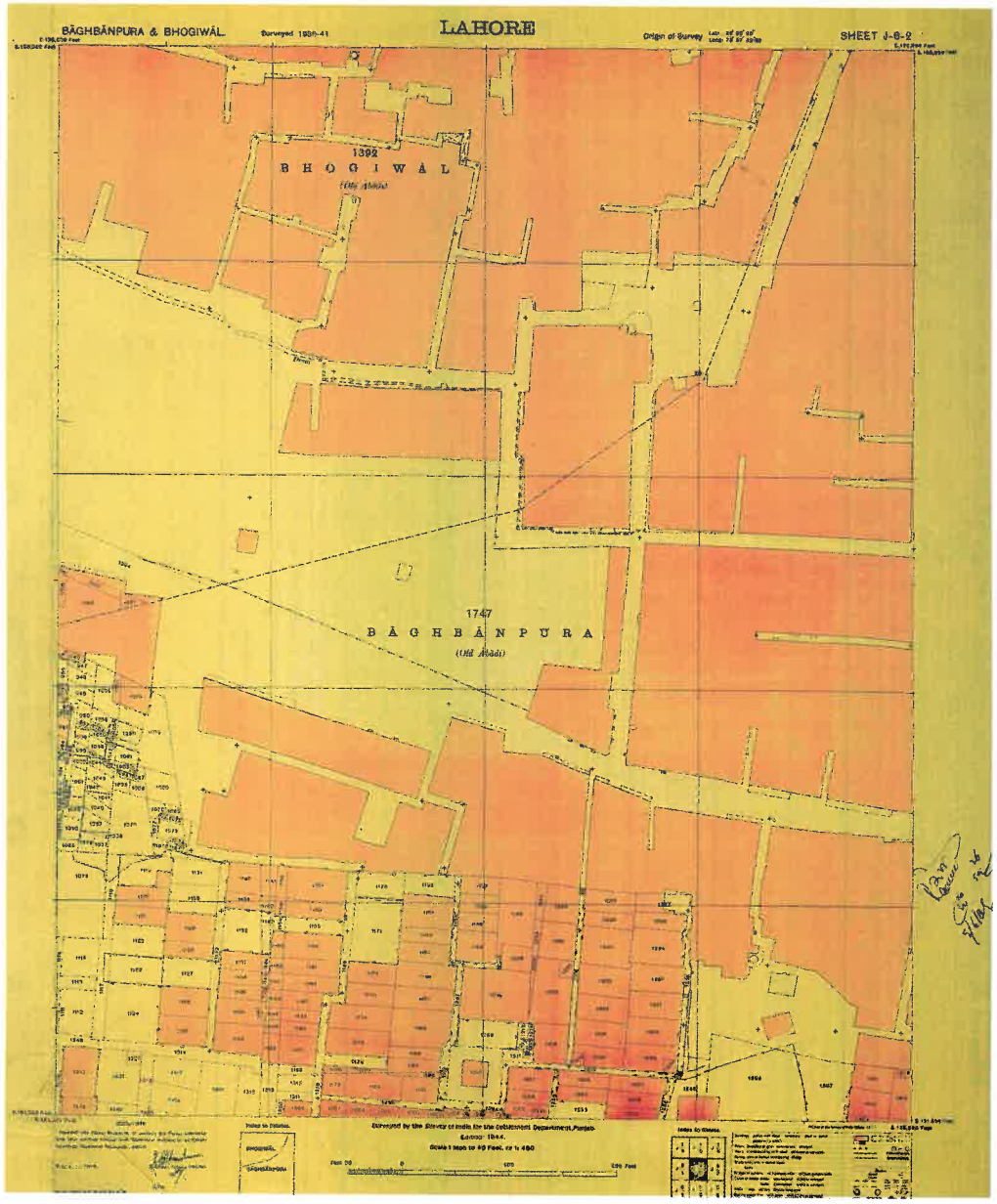


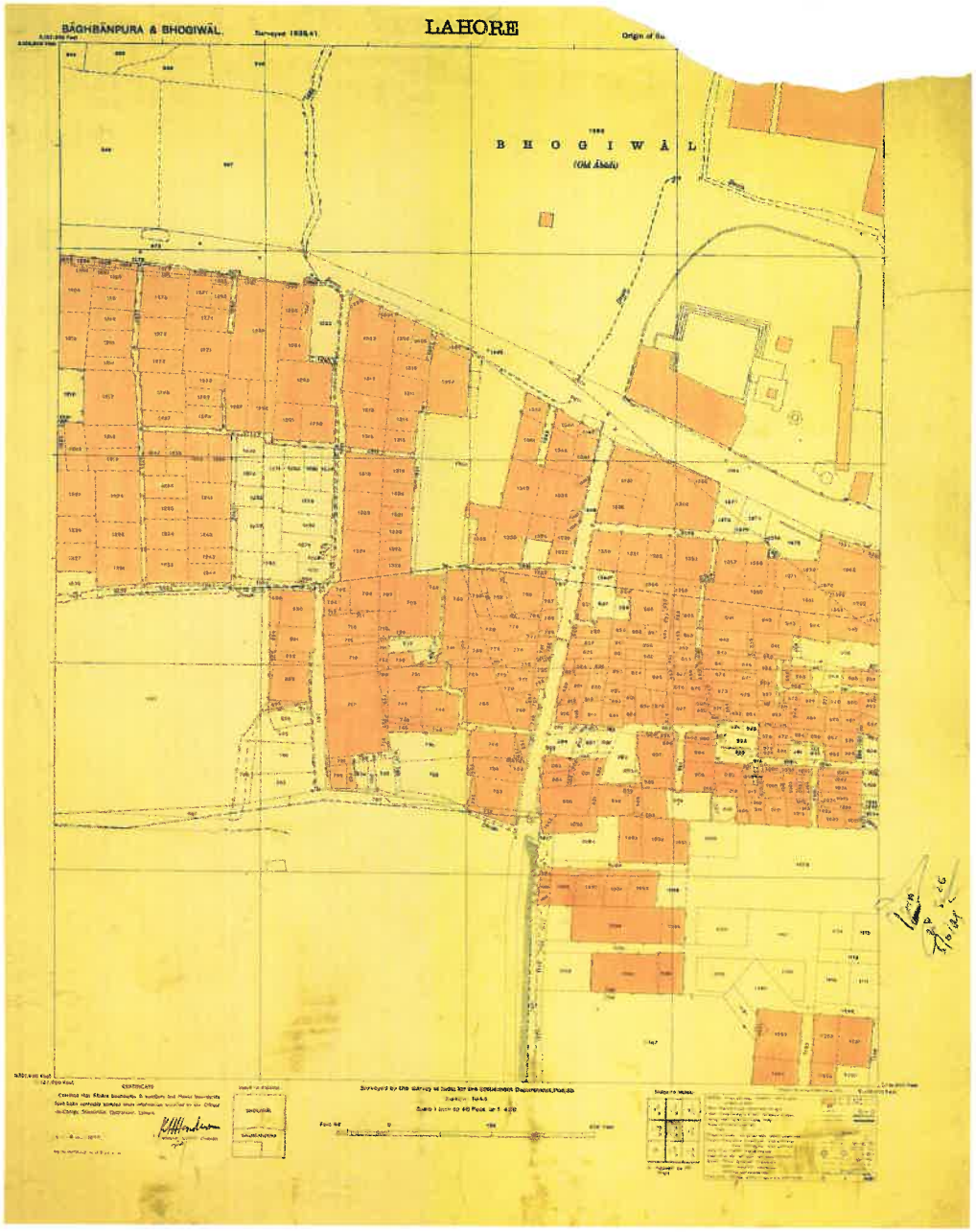
Masawis 1940

Around 1939-40, Survey of India undertook detailed physical surveys of Lahore on a scale of 1"=40' for the Settlement Department of Punjab Government. These detailed maps, known as "*Masawis*", were published in 1944. The maps, thus prepared, provided some practical information. Each property was given a *khasra* number and therefore, complete ownership of land/property was recorded. In addition, the steps protruding into the streets were also marked adjoining the property line.

The location of the electric pole, drains and all other street hardwares were also marked. The maps also provide an outline of plots, the boundary wall and built-up areas within it. The built-up areas are shown in pink and open areas are in white. These map provided a complete picture of construction density, and the relationship between covered and open areas.

These maps are very useful in the verification of property lines and encroachments, if any, developed over time.

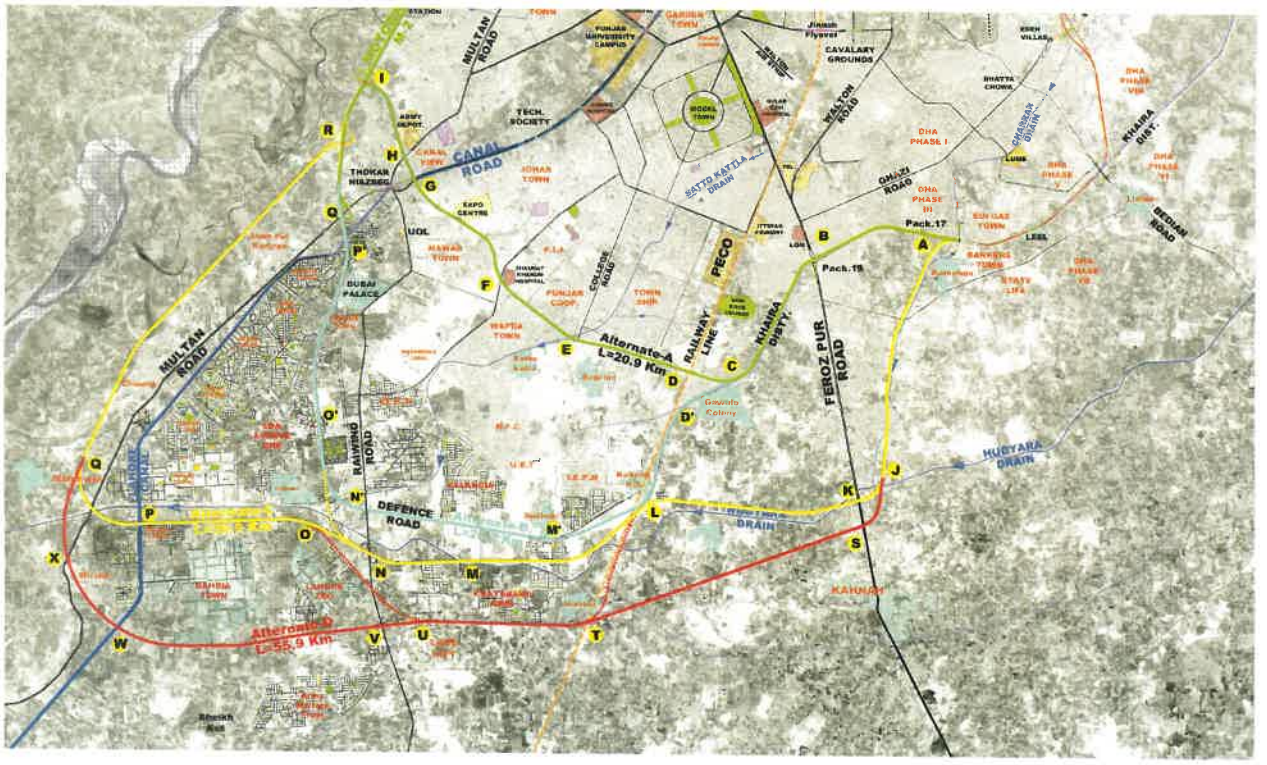




Masawi of Baghbanpura (top)

Masawi of Bhogiwal (bottom)

Planning and Development Maps of Lahore



Detail of Lahore Ring Road Initial Proposal

Industrial development in the country in general and Lahore in particular in the sixties and seventies became one of the primary reasons for urban growth of the city. The internal migration led to urban expansion particularly in the south and southeast of the city. The historic settlements become agglomerated and new suburbs were planned to meet the housing needs of growing population. The commercial centers turned into regional markets. This situation exerted unprecedented pressure on the housing and expansion of road infrastructure. In order to solve these problems, master plans, structural plans and infrastructure development plans were made. The maps presented in this section show the various approaches and efforts made just before and since independence to solve such problems.

Proposed Land Utilization in Lahore: 1944

In the province of Punjab, the task of physical planning of human settlements increased manifold in late 1930s. Therefore, a new Provincial Town Planning Department was created within the Punjab Government during the financial year 1938-1939. Architect-Planner U. Aylmer Coates was appointed as the first town planner, (Government of the Punjab, Public Works Department Building and Road Branch, 1940:85). He proposed the master plan for Lahore which he published as "Memorandum on Town Planning" in 1944 (Coates, 1944: 1-56). He was very much concerned with questions of congestion, unplanned growth and ribbon development along major roads. His report discussed the problems of existing and new residential settlements, location of Industries and went further to make recommendations for future development. The map attached to this report gives the proposed outline for the future development of Lahore.

Proposed Land Utilization in Lahore (opposite page)

In case of the Walled City, Coates mentioned that "it is a perfect example of the simultaneous evacuation and invasion of a congested area. As the new *abadis* developed many of the wealthier people left the city and settled outside, values tending to fall inside the congested areas in consequence. This actually offered an inducement to poorer new-comers and the population of walled city is now greater than ever in history.....The new *abadis* built after the last war around Lahore have certainly not reduced congestion in the old city or Qila Gujar Singh."

In case of Industry, he stated that "Already the location of industry at Badami Bagh, Lahore, has encouraged the development of Misri Shah, Farouq Ganj, Badami Bagh, and other areas north of Railway of Lahore. Unfortunately, no regulative plans were ready in advance when haphazard developed occurred."

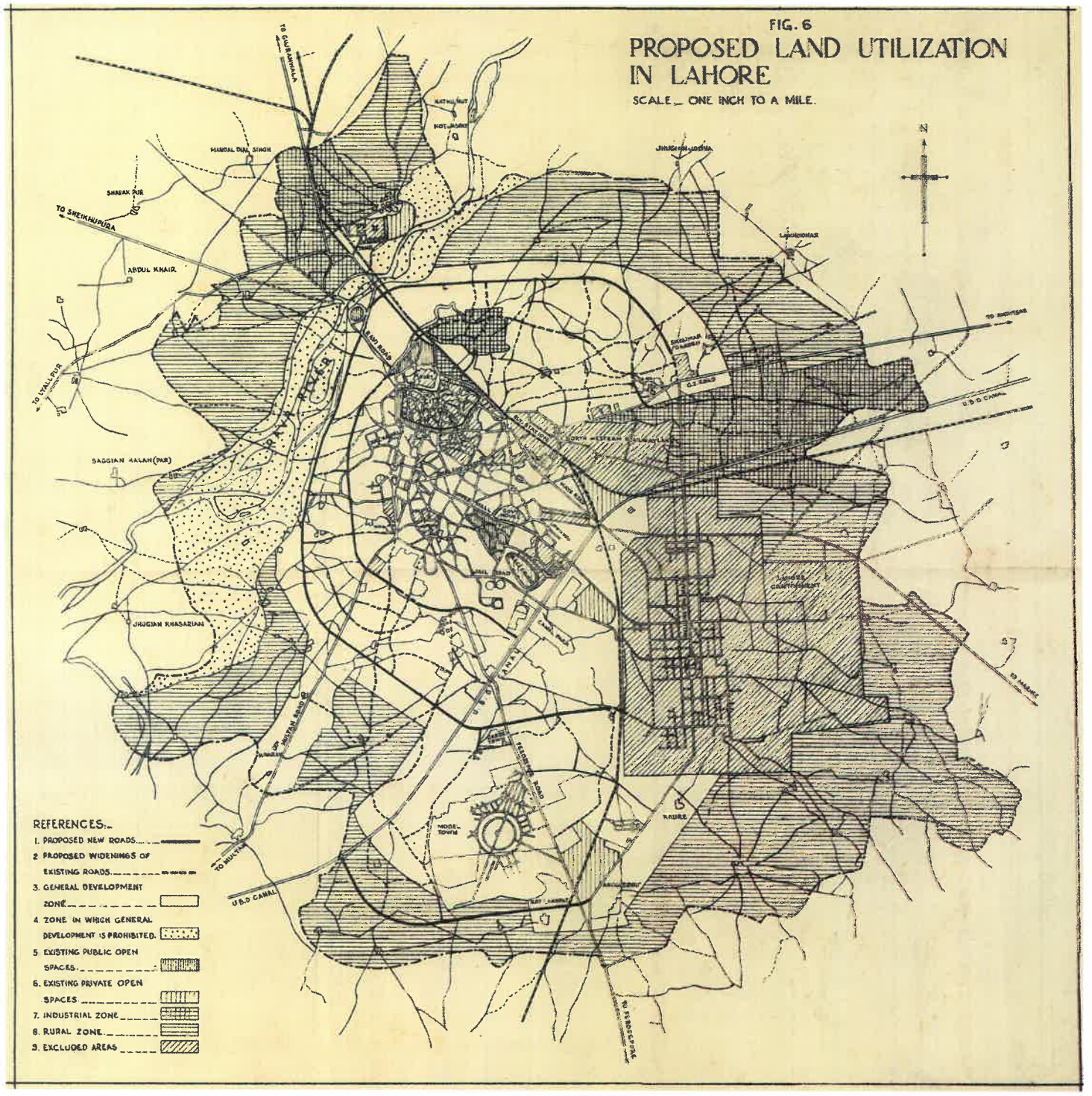
He also made reference to his analysis of open spaces stating that "there are about 1650 acres of open space of which about 1000 acres are set aside for private uses such as the University ground, the race course, the Chief College ground, Government House and two golf courses. The proportion of open space in Lahore is about 2.4 acres per thousand population but most of this is set aside either for passive recreation such as Lawrence Gardens, Gol Bagh and Hazuri Bagh or is used privately. The only large public open space entirely devoted to active recreation is Minto Park which is slightly less than 100 acres in extent. These calculations include the Lahore Branch Canal which is one of the most valuable open spaces in Lahore, especially in hot weather. From Shalamar to Ferozepur Road, there is 4- 1/2 miles of the canal and with its wide-grassed spaces at its side, it covers an area of about 80 acres of great use to the public of Lahore." It was suggested that at least 5 acres per thousand population be provided for Lahore.

Considering problems associated with the clearance of slums, provision of new housing and appropriate location of Industry, a comprehensive proposal was made in which proposed housing areas were suggested between the existing city and Model Town, Industrial growth between Bari Doab Canal and Grand Trunk Road, and in this regard Batapur and Pakistan Mint were a few examples. Housing was banned on either side of the Ravi River, while suburban areas were recommended for agriculture to provide food to the inhabitants. In his plan, Coates also suggested radial roads with a circular model for urban development.

FIG. 6

PROPOSED LAND UTILIZATION IN LAHORE

SCALE.- ONE INCH TO A MILE.



Lahore Guide Map 1954: Surveyed 1945, Published 1954

Just before independence, architectural practices in Lahore had been well established. The local architects, such as Chishti brothers, Mr. Malhotra were very active in the design of private houses especially in Model Town. The Colonial Lahore was taking shape. The English as well as the local architects contributed to shaping the city. Basil M. Sullivan, who made a lot of effort in this regard, completed his services and returned to England. During his term of office, a large number of buildings were designed and built. The most recent buildings built under his supervision were Commissioner's House and Chief Justice's Residence (completed in 28th September 1936 and November 1936 respectively), New Police Station on Ferozepur Road (completed and occupied on 15th January 1937), Public Health Center at Lady Wallington Hospital (Completed in March 1937), thereafter, Mr. Nariman B. Shroff took charge as consulting architect during 1940-1941. Around this time, Ganga Ram Hospital was opened on April 13, 1943. It was designed by architect T.R. Mehandra.

The management of growth of Lahore to achieve a meaningful built environment was gradual. Rules and regulations were prepared and implemented in true spirit to achieve a well organized visual landscape. During the Mughal period, people's participation was most significant. A Kotowal was appointed in each town and he was left open to decide as to how he should conduct himself. He had to keep a register of houses and frequented roads and engaged the citizens in a pledge of reciprocal assistance and bound them in common participation of weal and woe. The British, soon after the occupation of Lahore, planned the expansion in the south and southeast of the Walled City. Initially, the layout of roads and urban development took place under the supervision of military engineers. In particular, their services were hired for the design of buildings in Lahore Fort and Cantonment.

In 1867, an Act was passed by the Governor General of India for the appointment of municipal committees and defining their limits. The municipal funds were placed at the disposal of committees for its utilization in the construction of new road infrastructure and repairing and cleaning roads, drains, tanks and water courses. In addition, the committee was also authorized to construct schools, dispensaries and market places. In 1912, the Cooperative Societies Act was passed which enabled societies to purchase or sell lands to its members. The act played an important role in reliving the housing shortage. A number of housing schemes including Model Town and Muslim Town were developed under this act. As the work of master planning and architectural increased, the Town Improvement Trust Act was passed in 1922 which enabled the creation of Lahore Improvement Trust. Under the act, the Trust could prepare and implement general improvement and rebuilding schemes, street schemes, development and expansion schemes, housing accommodation schemes and re-housing schemes. The consulting architect of Building and Road Branch served as Secretary of the Committee. The Trust controlled the growth of the city by carefully scrutinizing new development projects and controlling the encroachments.

The expansion of Colonial Lahore took place manifold within a span of almost 90 years. Therefore, a new mechanism was required to develop and manage a meaningful built environment. In order to achieve this, the City of Lahore Corporation Act was passed in 1941 withdrawing the Municipal Act of 1867. The corporation was to draw up a town planning scheme providing for:

- A direction that in any street, portion of street, or locality specified in the scheme, the construction of more than a specified number of houses on each acre of land would not be allowed.
- The prescription of building lines and street lines on both sides of the street. This enabled a continuity of streetscape in a uniform and consistent manner.
- The adoption of a standard plan either for the division of land into building sites, or for location of building within a building site.
- Provisions regulating, in the interest of safety, the height and safety of boundary walls, fences, hedges near the corner of bends of the street.

The chief executive officer might refuse or approve the site of a proposed building on the following grounds:

- That the erection or re-erection of the proposed building on such sites is in contravention

of the town planning scheme.

- The place where the position and direction of street had not been determined and proposed the building might obstruct or interfere with the construction in the future of suitable streets or it may damage water supply.

The new indigenous schemes could be found all over the city, planned in open areas and around existing settlements. These schemes were laid out on the grid iron pattern and found their beginning in the saddar bazaar area of Lahore cantonment. The land was surveyed, streets were laid out at regular intervals, and plots of regular size were marked and services laid out. The concept was later followed in all housing schemes planned by Lahore Municipal Committee and Lahore Improvement Trust. The double-storied row houses built on such plots were planned around central courtyards. Discourse on sanitary issues became more and more frequent among the British administration. As a result, in 1887 provincial sanitary boards were set up across India. Biannual inspection reports on municipalities were filed with the municipal committees by the Provincial Sanitary Engineers. Building plans were required to be submitted to the municipalities before construction. The general thrust of the required plans, therefore, was to ensure that issues of safety and sanitation were adequately attended to.

The British planned new communities in the suburbs of Lahore and around indigenous settlements. Their growth was gradual over space and time. Modern town planning principles were applied to their planning. Lands were surveyed, plots were subdivided, services were laid out and then allotments were made. The plots were of definite size but generally designed to accommodate the middle class society. These communities had wider and straight roads 20 to 30 feet wide for the movement of service vehicles as well as generation of mutual shading of the streets.

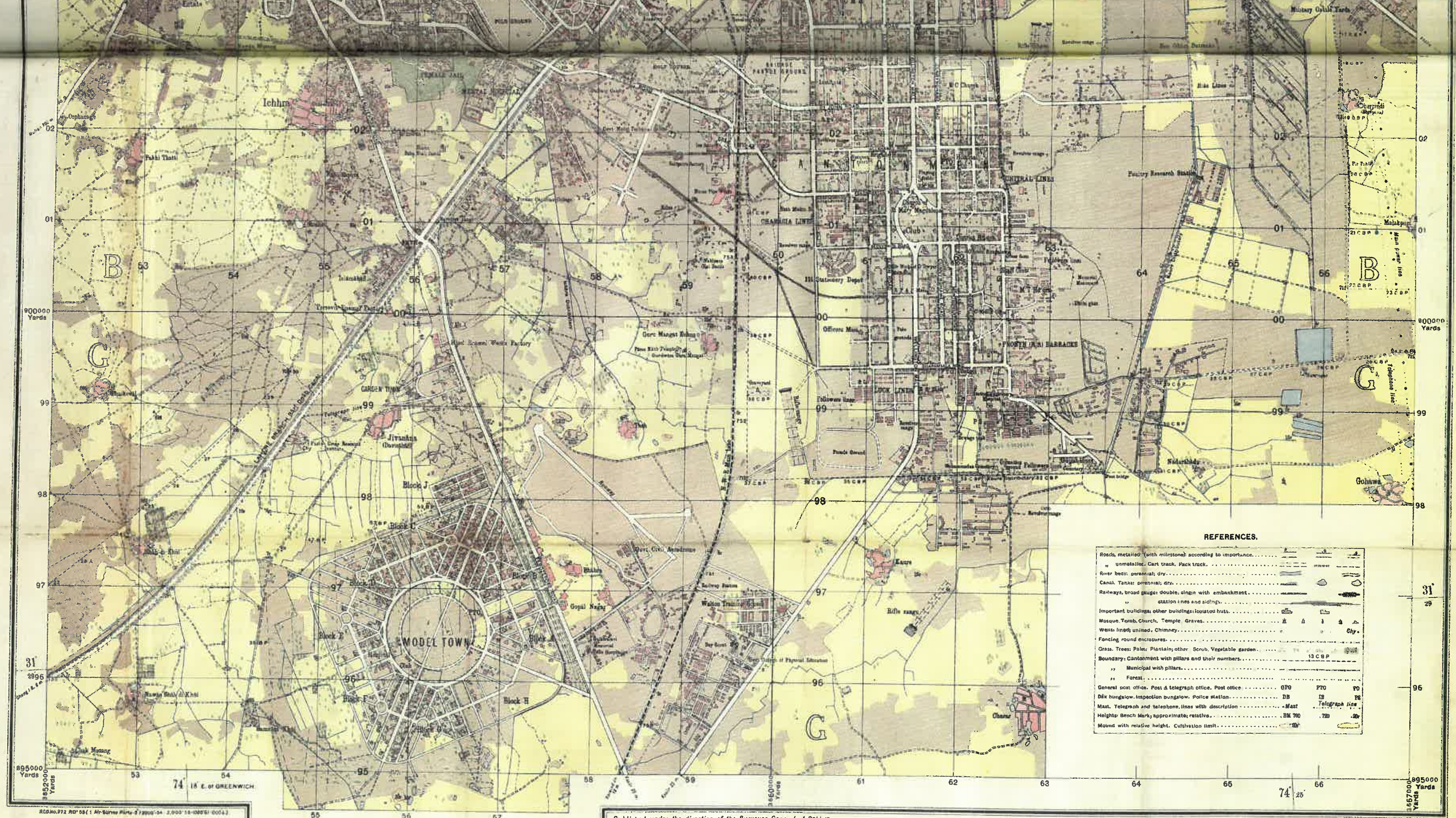
Surveyed 1945 published 1954 Lahore Guide Map (page overleaf)

This model was first put into practice at Saddar bazaar Lahore. The layout followed a rectilinear pattern creating residential blocks of almost equal size. These were low rise, low density settlements. Mixed land use was deliberately encouraged. Commercial activities were planned along the main roads. Thus shops and residences were not segregated but they co-existed with each other. The shops were designed on the ground floor and residences on the first floor. These shops carried items of daily use such as bakery, vegetable and meat shops and firewood stalls. The main idea was to provide grocery items on the residents' doorsteps based on the model available in the Walled City. The planning concept was close to cultural norms where shops were designed in close proximity to the residences but this arrangement reduced the privacy of the residential neighborhoods.

The 1945 map indicates that most part of Lahore was occupied by such communities. They were designed to accommodate mainly people of different religious groups. Thus, Krishan Nagar and Sant Nagar were occupied by the Hindu community, Saadi Park and Muhammad Nagar by Muslims. Considering the requirements of the inhabitants, land use was designed accordingly. In addition to the religious buildings, playgrounds and graveyards also become part of the neighborhoods. The location of such settlements was pre-planned. Krishan Nagar and Sant Nagar already had Hindu educational and welfare organizations while Muhammad Nagar and Saadi Park were close to Bibi Pakdaman and the Mozang area, both dominated by Muslim populations. At Krishan Nagar, each residential block contained 4 to 6 houses of different sizes accommodating different income groups, thus creating social interaction among them. Most of the houses faced two streets which made each room airy and well lit. Since streets were located at short intervals, therefore, through traffic was almost negligible. Every house had convenient direct access to the major road. The cross junction of the streets were extensively used for large family functions, particularly marriage parties. In such instance, one side of the street was used by males; the second by females, while the third side was reserved for cooking purposes.

According to Qadeer, these settlements were an effort on the part of corporate groups who conceived residential environments for their own communities. The term nagar is of Sanskrit origin, used to refer to traditionally self-contained and self sufficient communities of definite size having their own bazaars and community.

The growth of economy in Punjab led to the expansion of commercial, administrative and industrial activities in Lahore. As a result, the population grew mostly due to internal migration and urban expansion took a new height. The need was felt for a Provincial Town Planning Depart-



RLO No.972 RO 58 (1 Air Survey Party) 1950-54 2,000 '15-1000 '61 00043

1st Edition 1921; 2nd (Revised) 1927; 3rd 1930.
4th (Revised) Edition 1935; 5th 1954.

Refer to this map as.- THREE INCH LAHORE GUIDE MAP FIFTH EDITION.

Published under the direction of the Surveyor General of Pākistān.
1954.

Scale 3 Inches to a Mile, or 1:21,120.

Yards 1000 500 0 1000 2000 3000 Yards
Furlongs 8 7 6 5 4 3 2 1 0 1 2 Miles

A relative height, e.g. .20r, marked along a canal, indicates the height of the top of the canal embankment above the adjacent country.
Water features are shown in blue where they generally contain water.

GRID I (Yards)

Grid references are given in hundreds of yards East and North of the south-west corners of the lettered squares: thus the grid reference of △ MIĀN MĪR is B 591043 (for grid letters see body of map).

For more precise work, references may be given to the nearest 10 yards, viz. 59070427

Compilation Index.
A Modern survey 1932-33, generally corrected on the ground in 1950-51.
B Modern survey 1932-33, verified from air photographs taken by R.P.A.F on scale 7 inches to one mile in 1948, and generally corrected on the ground in 1950-51.
C Modern survey 1950-51.

PRINTED AT THE SURVEY OF PĀKISTĀN OFFICES, RĀWALPINDI.

GOVERNMENT OF PĀKISTĀN
COPYRIGHT RESERVED

It is an offence under the Copyright Act to make and issue any copy or copies of this map or any part of this map, with or without alterations and additions, without the written permission of the Surveyor General of Pākistān.

Price. Four Rupees.

پاکستان سروے ڈیپارٹمنٹ

পাকিস্তান সার্ভে বিভাগ

Scale 3 inches to a Mile.

Surveyed 1932-33.
(Corrected 1950-51. Also see compilation index.)

مسجد پاکستان

LAHORE GUIDE MAP

FIFTH EDITION

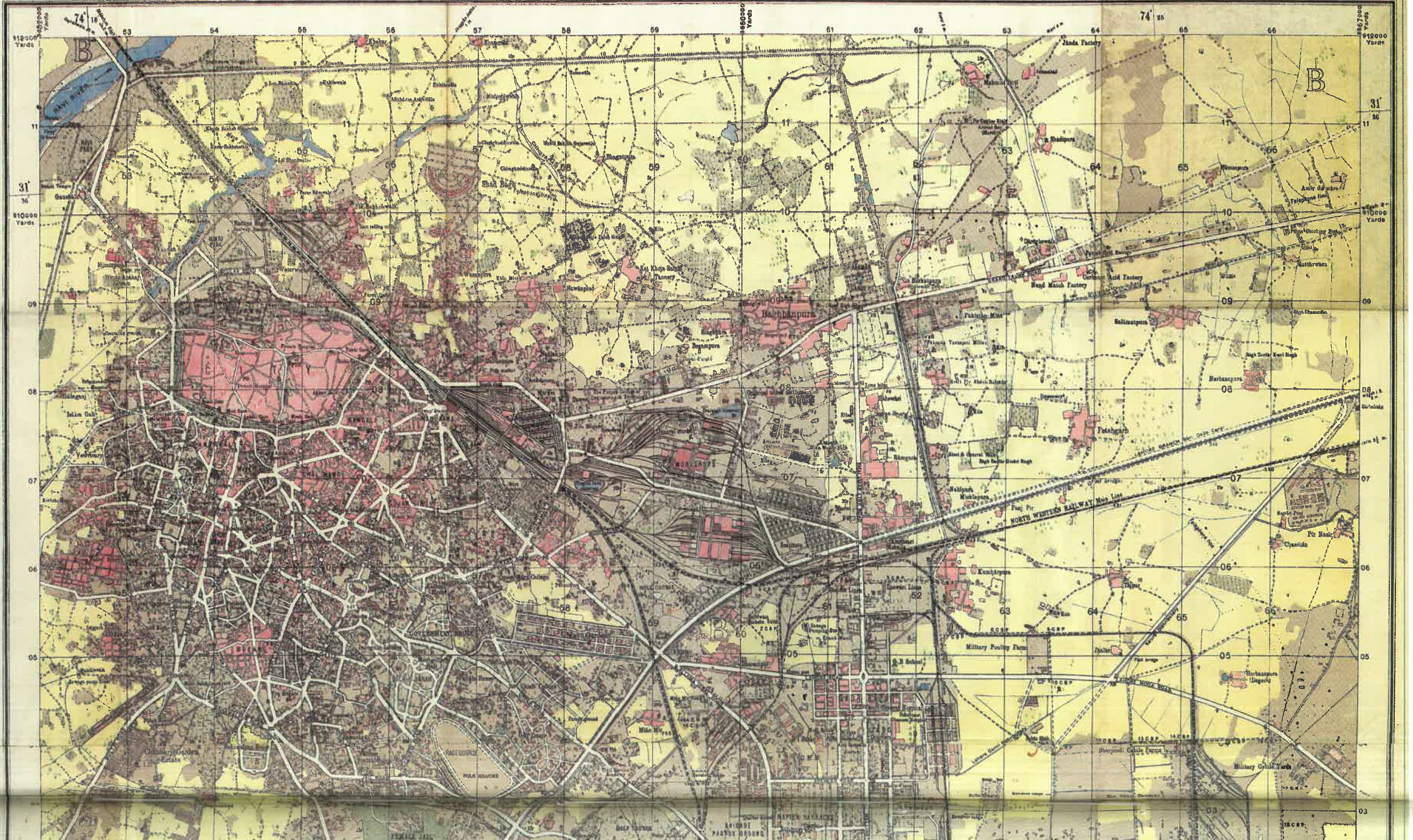
True North (T.N.) in this sheet is 3° 25' West of Mean Grid North (G.N.).
Magnetic North (M.N.) about 2° West of Mean Grid North in 1946.
(Annual Change negligible).

Refer to this map as:- THREE INCH LAHORE GUIDE MAP FIFTH EDITION.

SURVEY OF PĀKISTĀN

REFERENCE LIST

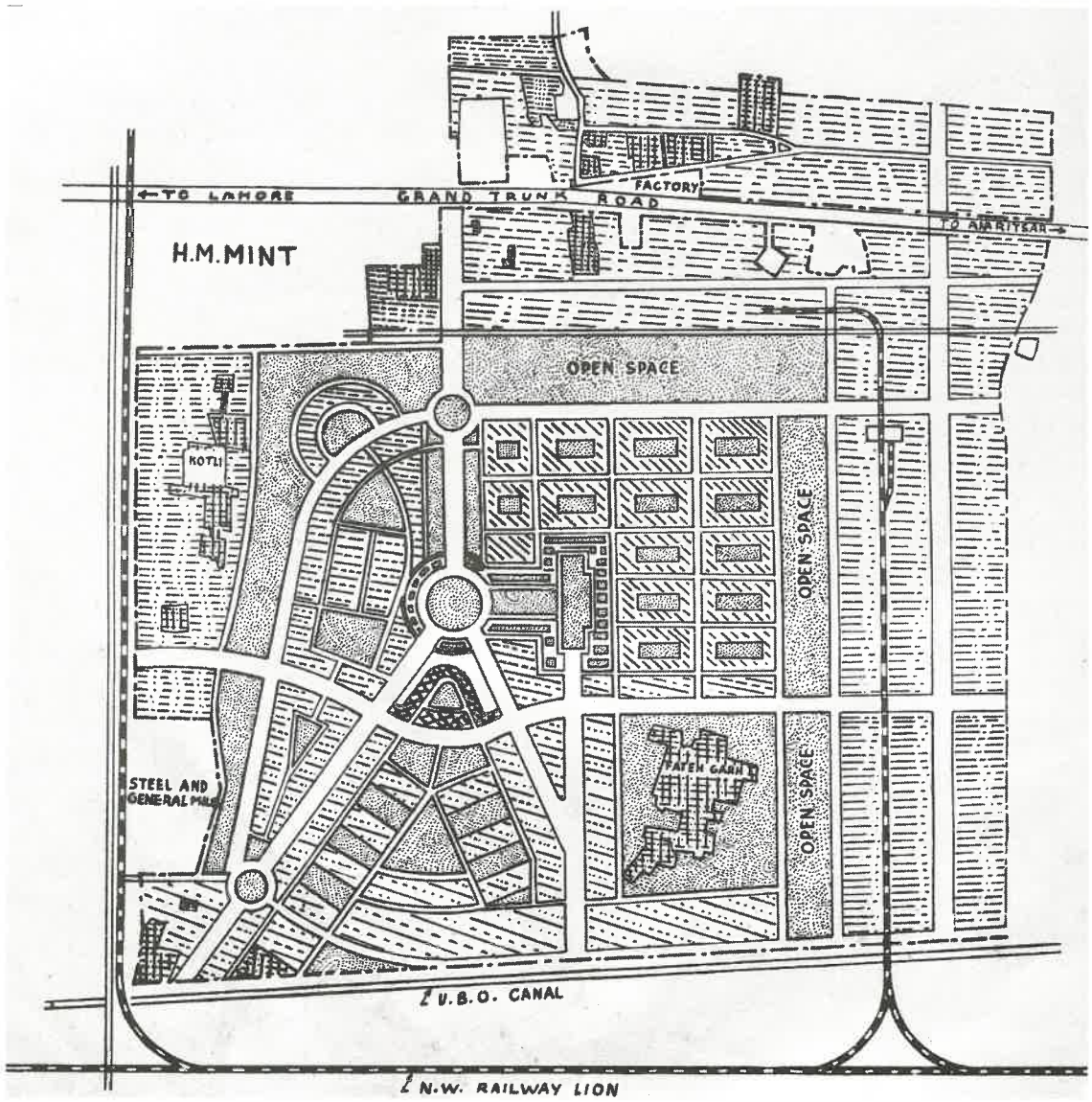
Grid Reference	Name	Ref. No.
543060	Accountant General's Office	1
537078	Ahmadia Buildings	2
546072	American Mission School	3
530064	Anārkali Tomb	4
540080	Archaeological Dept.	5
[illegible]	Assembly Hall	
538080	Bādshāhi Masjid	
545039	Bahāwalpur House	
540069	Bhārat Buildings	6
597064	Boy Scout Headquarters	
613017	Brigade House	
540062	Cathedral	
562033	Central Jail	
560044	Chamba House	
530039	Chauburji Garden Estate	
534056	Chauburji Ground	
575046	Chiefs' College	
532065	Council Chamber	
543060	Currency Office	7
533071	D.A.V. College	
531073	D.A.V. High School	8
624009	District Headquarters	
530066	D.P.I. Office	9
553058	Faletti's Hotel	11
551050	Fatima Jinnah Medical College	12
553061	Forest Office	
571009	Forman Christian College	
544090	Fort	
619006	G.O.C.'s Bungalow	
596041	Golf Estate	
543063	G.P.O.	
537072	Government College	
585975	Govt. Civil Aerodrome	
567033	Government House	
539075	Gulāb Singh's Printing Press	13
543060	High Court	
595014	Hume Pipe Works	
544064	Imperial Bank of India	
533054	Income Tax Office	14
554074	Islāmia College	
535073	Kachahri	
[illegible]	Kapūrthala House	
549066	King Edward Medical College	
546073	Lady Aitchison Hospital	
537080	Lady Willingdon Hospital	15
563050	Lawrence Hall	16
454053	Masonic Lodge	
582052	Mayo Gardens	
549071	Mayo Hospital	
531050	Mayo School of Arts	17
534074	Mela Rām Factory	
543076	Mela Rām Tank	19
560036	Mental Hospital	
550035	Meteorological Observatory	
540097	Minto Park	
563965	Model Town	
543050	Montgomery Hall	
538065	Museum	
538062	National Bank	
559055	Nedou's Hotel	
542067	Nila Gumbad	
600064	N.W.R. Dispensary	20
560067	N.W.R. Headquarters	
579079	N.W.R. School	21
540070	Oriental College	22
549048	Patiāla House	
565066	Police Lines	23
534072	Police Offices	24
534068	Postal Stock Depot	25
572049	Punjab Club	
537064	Punjab Rifles (A.F.I.) Headquarters	26
573060	Queen Mary College	
555056	Queen Victoria Statue	27
563038	Racecourse	
567078	Railway Station	
547074	Ratan Chand Tank	28
525100	Rāvi Park	
551055	R.C. Cathedral	
566066	R.C. Church	29
539063	Registry Office	30
563081	Sarāi Aslam Khān	31
549072	Sarāi Muhammad Shafi	32
547072	Sarāi Ratan Chand	33
561079	Sarāi Sultān	34
531065	Secretariat	
613090	Shālamār Gardens	
615014	Sir Charles Napier Memorial	35
533049	Sir Ganga Rām Hospital	36
540091	Samādh Ranjit Singh	37
546063	St. Joseph's Church	38
545063	Telegraph Office	
546070	Temple Chhajju Bhagat	39
582080	The Punjab College of Engineering & Technology	
536064	Town Hall	
586012	United Christian Hospital	40
539064	University Hall	
529073	Veterinary College	
601968	Walton Training School	
557081	Zoological Gardens	



ment which was created in the financial year of 1938-39. During the rest of the financial year 1938-39, a number of housing schemes were prepared by the municipal committee and submitted to the town planner's office. These schemes were prepared under Section 192 of the Punjab Municipal Act, 1911. In his annual report of 1938-39, Aylmer Oates reported that those schemes generally suffered from badly sited roads of inadequate width, plot sizes too small to accommodate healthy buildings no provision for space around buildings or for the placing of buildings so as to secure through, ventilation, lack of open spaces for recreational purposes or for public services, no consideration of levels and no enforcement of standards for privately owned streets and their subsequent taking over and maintenance by the local highway authority (Government of the Punjab, Public works Department, Buildings and Road Branch, 1940: 85).

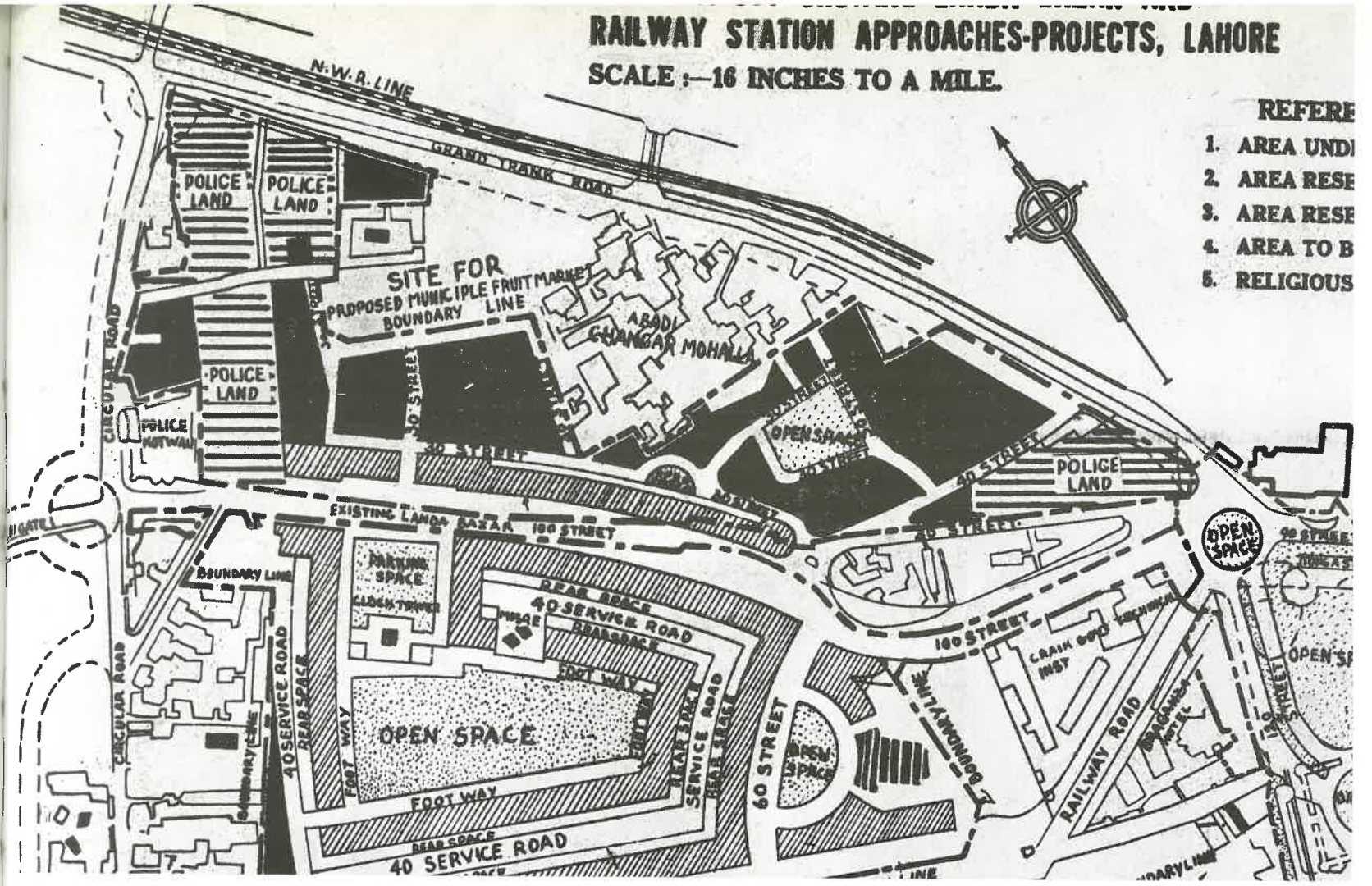
The procedure of approval was quite strict. When a municipal committee was required by the commissioner to prepare a Building or Town Planning scheme and failed to do so within six months, the commissioner generally called upon the Town Planner to prepare the scheme on his behalf. In this event, the Town Planning Department was unable to proceed until the requisite surveys had been provided.

Development plan of Industrial area between Lahore Mint and Bari Doab Canal (1945)



At this stage standards for housing schemes were prepared and enforced. Until just a few years ago, when these laws were passed, 10 to 15 percent land was allocated for streets in *abadis*, later (1938-39) this allocation up to 30 percent. This figure varied from case to case and there was not any hard and fast rule for an entire scheme. It was also stated that no through traffic link is to be planned at a width less than forty feet, and no minor road serving development on both sides be less than 30 feet. Roads less than 30 feet were meant only for short crossing streets.

The importance and usefulness of a street was described as: "the streets are the main channel by which air circulates through a building area and this increase in the width of streets not



Development plan of Landa Bazaar area between Lahore Railway Station and Delhi Gate (1945)

only adds to the convenience of the layout and the community of the state but also its healthiness". The byelaws of Lahore required ¼ of each site to remain open.

Similarly byelaws were made for spaces present around the buildings. These byelaws followed British precedents. According to them, ¼ of the area of each site except those facing two streets must be kept open. The condition was not applicable to buildings with shops on ground floors but in such buildings open spaces had to be left on the floors subsequent to ground floor. It was observed that open spaces in the form of courtyards were generally encroached upon and, therefore, rear rooms were generally deficient in light and ventilation as the houses were laid back-to-back and side by side. When these byelaws were made in 1875, such buildings were declared illegal. The new standard called for 1/3rd of the area to be kept open in the central area of town irrespective of the use of building. In new *abadis*, only about ½ of the lot size could be covered, while in areas for detached residences, such as bungalows, a maximum of 1/4th of the site could be occupied by the bungalow itself and a further 1/8th by the subsidiary buildings.

In all *abadis*, an open space of 15 feet depth had to be kept open at the rear of the building within the limit of the site. Thus the open space at the back of two plots provided an air shaft of about 30 feet. In this open space, a latrine of not more than 40 sq. feet was allowed on one side. In addition, an open space of 5 feet was required to be left on one side of the building. Some height restrictions were also enforced. The residential buildings in the abadi area could be 38 feet high. This included two floors and a barsati but in case of wider roads the height restriction was 60 feet. According to Section 192 of the Punjab Municipal Act, 1911, 10 percent of land of any owner could be transferred to the municipality for such public purposes as in the form of open spaces. Density zones were also laid down in Lahore. Abadi zones varied from 7 marlas to 1 kanal, whereas sizes of detached residences varied from 1 to 15 kanals.

The houses were both single and double-storied with internal courtyards to keep a house cool during the summer. These row houses had continuous street façades using standardized design vocabulary using local as well as classical elements. The use of pediments or balconies was a common feature of these houses. The planning was such that the drawing room or baithak faced the main street and the staircase was provided in the entrance lobby. The living rooms were provided at the rear. The cooking area was provided in the courtyard adjacent to the drawing room. Dry toilets were located at the rooftops. Colonial classical architectural elements dominated the building facades. Flat pilasters, round columns and pediments dominated the building façades.

Lahore: 1947

In 1947, the Lahore Improvement Trust published its annual report giving the details of existing and proposed schemes. The proposed schemes are shown in red. The areas included within the jurisdiction of the Trust were Begum Kot and Shahdara in the north, Kot Ghazi and Harbanspura in the east, Niaz Beg in the southwest, Kot Lakhpat and Amar Sidhu in the south and Saggian Kalan in the west. Major schemes included in the project were Poonch Road schemes and the New University project at the present site of Quaid-e Azam Campus of Punjab University, new Civil Station project (later Gulberg Scheme), Shalamar industrial Area Project at the sites of Kotli Pir Abdul Rehman and Fateh Garh, Landa Bazaar and Misri Shah Project and Baradari Project across the River Ravi. Some of these schemes were actually implemented after independence.

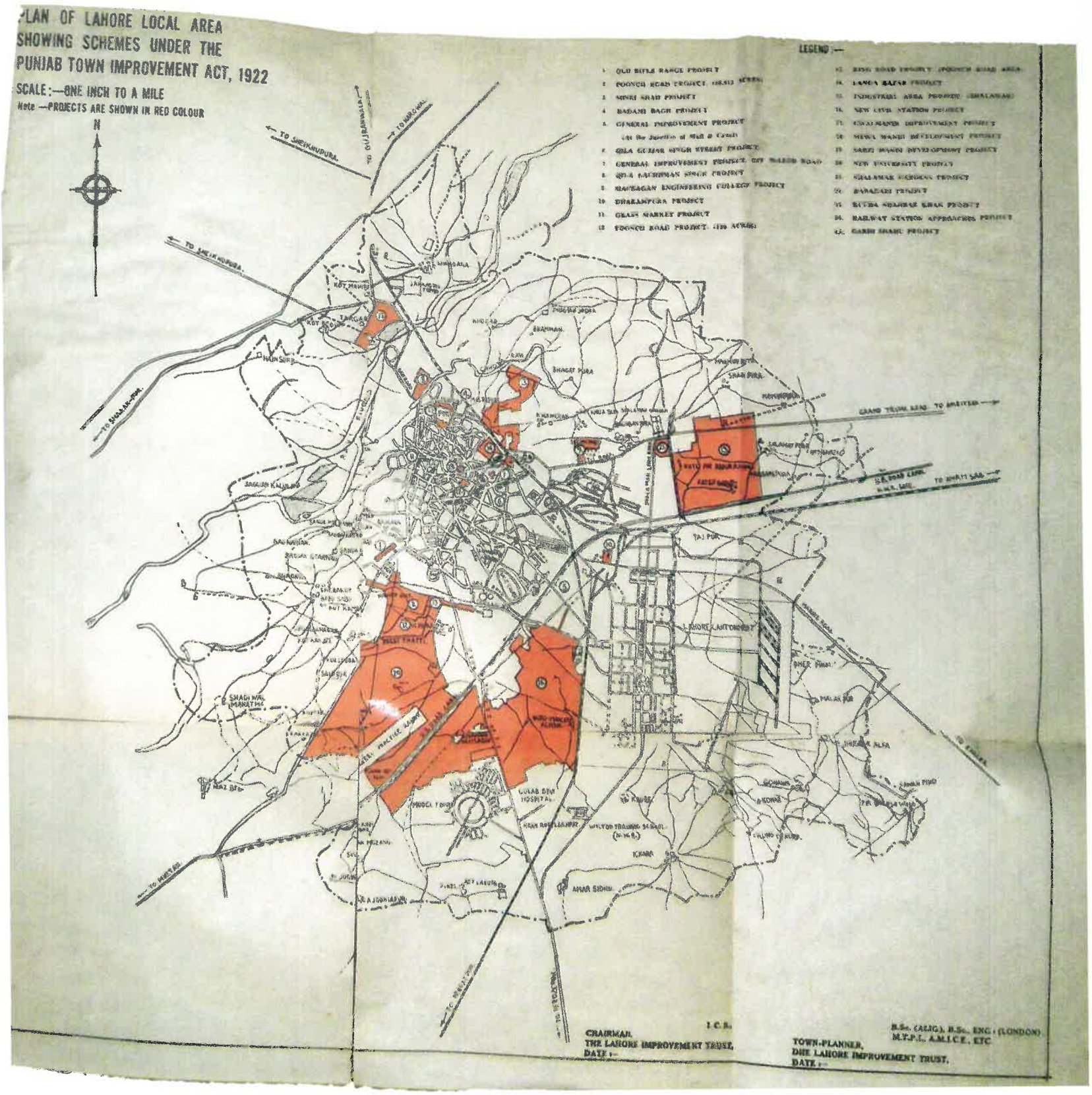
The boundaries of the Trust remained the same until the late sixties, when the new Township project was planned and implemented south of Model Town.

Proposed scheme under the Punjab Town Improvement act, 1922 (opposite page)

PLAN OF LAHORE LOCAL AREA SHOWING SCHEMES UNDER THE PUNJAB TOWN IMPROVEMENT ACT, 1922

SCALE :—ONE INCH TO A MILE

Note —PROJECTS ARE SHOWN IN RED COLOUR



Master Plan for Greater Lahore – 1966

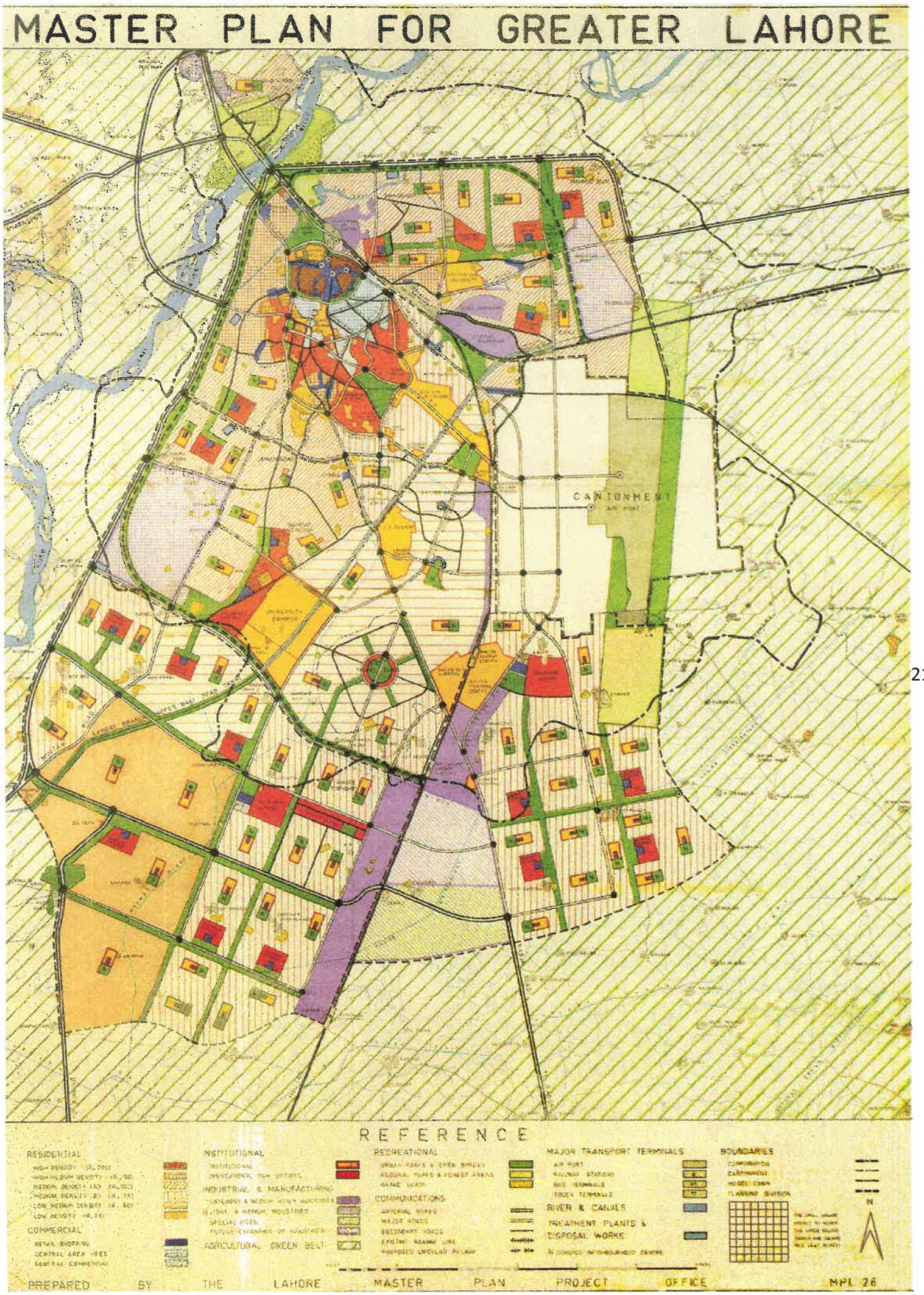
Master Plan of greater Lahore 1966, (opposite page)

The preparation of Master Plan for Greater Lahore was started in 1961 on the recommendation of Second Five year Plan (1960-65) by Government of Pakistan. During this time the growth of town was taking place at a much faster pace due to industrialization along the major highways leading to the city. A high-level committee consisting of various specialists was set up to look into different problems facing the city and to suggest guidelines for the future growth of the city. The need for such committee arose due to the fact that neither the Lahore Municipal Corporation nor the Lahore Improvement Trust had specialists to undertake this task. It took five years to complete the study and prepare recommendations for the master plan. It was finally submitted to the provincial government in 1966 for final approval. The master plan remained a matter of discussion for five years until 1972 when it was finally approved and came into force on September 1, 1972. The guidelines for the master plan were based upon the partial upgradation of the land use survey of the city prepared during 1939-40 (Housing and Physical Planning Department, 1966).

The master plan emphasized the creation of a single planning authority out of Lahore Municipal Corporation (LMC) and Lahore Improvement Trust (LIT) to manage and guide the development of the city and act as a custodian of the plan. However, after two years (1974) LIT was transformed into Lahore Development Authority with functions and powers similar to LMC. The LMC continued to implement the recommendations of the master plan within its limited areas of jurisdiction.

Today, the control over the development of Lahore mainly rests with five organizations: Lahore Development Authority, Lahore Municipal Corporation, Cantonment Board, Defense Housing Authority and Model Town Cooperative Housing Society. These organizations are quite independent and prepare their own rules and regulations. The growth or change in the byelaws of one area affects the others. In particular, the master plan does not cover areas under the jurisdiction of defense organizations. As a result, the objectives and spirit of the original master plan could not be achieved. In addition, these master plans were based upon inaccurate and obsolete data. The delayed implementation and lack of administrative framework and legal cover led to an increase in the gravity of the problem.

The shortcuts and bad policies of the government supported by the planners and bureaucrats led to a disastrous situation. Instead of proper land use planning, residential properties on either side of important roads were declared as commercial properties to gain the commercialization fee from the owner at the time of approval of the plan or sale of the properties. Such decisions were taken without considering their repercussions. On such roads, neither the road width was increased, nor parking lots constructed. With the increase in the floor area ratio, there resulted a heavy burden on the services which were not improved to meet future requirements. Pedestrians were especially affected by these decisions. The lack of footpaths along all major thoroughfares and absence of greenery led to worse environmental problems. The commercialization policies of 1982, 1988 and 1993 aggravated the traffic problems along the major roads.


MASTER PLAN FOR GREATER LAHORE
CANTONMENT
REFERENCE
RESIDENTIAL
COMMERCIAL
INSTITUTIONAL
INDUSTRIAL & MANUFACTURING
AGRICULTURAL GREEN BELT
RECREATIONAL
COMMUNICATIONS
MAJOR TRANSPORT TERMINALS
AIR PORT
RAILWAY STATION
BUS TERMINALS
TRUCK TERMINALS
RIVER & CANALS
TREATMENT PLANTS & DISPOSAL WORKS
BOUNDARIES
PLANNING DIVISION
N
PREPARED BY THE LAHORE MASTER PLAN PROJECT OFFICE
MPL 26

Lahore: Development and Spatial Organization of its Central Business District. 1979

In 1979 Josef Mayer published his book "Lahore: Entwicklung und räumliche Ordnung seines zentralen Geschäftsbereichs (Lahore: Development and Spatial Organization of its Central Business District)." This book was the outcome of his doctoral thesis which he undertook at Universität Erlangen-Nümberg in 1976. The book contained 10 maps and an index map. The maps included general maps of Lahore as well as detailed maps of the central business district. The general maps provided information on spatial growth and commercial development taking place in different areas. The detailed maps were very elaborate and provide detailed land use of areas stretching from The Mall up to the Walled City.

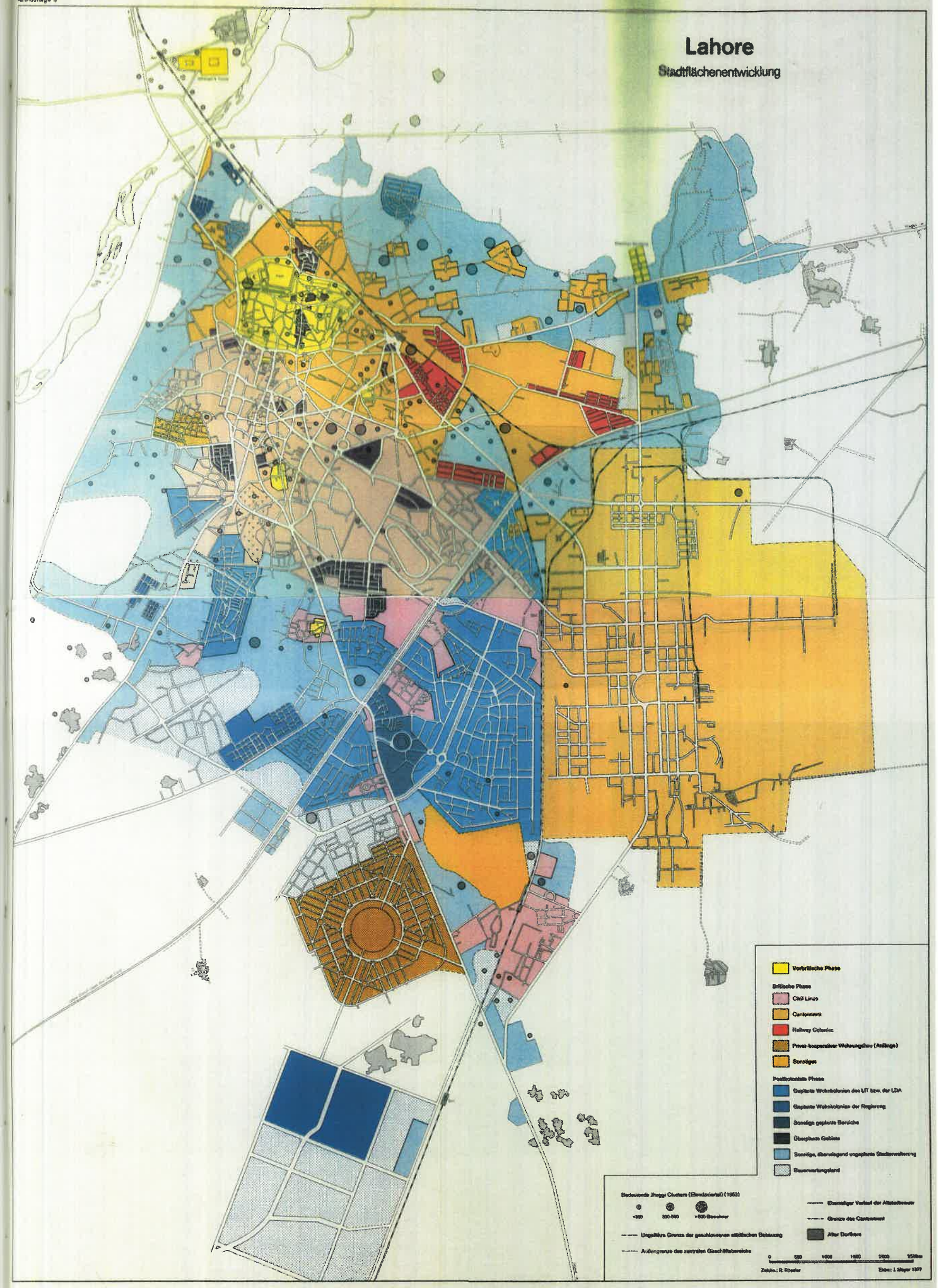
Lahore Development and Spatial Organization of its Central Business District. 1979 (opposite page)

In these detailed maps, Mayer has thoroughly documented various shops and/or commercial activity. These maps show the central business district as having a variety of commercial activity from shops dealing with specialized items to departmental stores along The Mall, from specialized shops in the Anarkali area and retail shops to specialized whole sale markets in the Walled City area. In fact, these maps are extremely useful, giving for the first time detailed commercial land uses in the central business districts of Lahore.

From the commercial point of view, the decade of the 70s was the most significant in the history of Lahore. The oil boom in the Middle East attracted construction workers from Pakistan. The remittance of foreign exchange brought significant economic prosperity to the country. This prosperity was also witnessed in the architectural arena of Lahore. A new concept of shopping plazas was introduced. Panorama Shopping Centre, the first ever shopping plaza, on The Mall was built. Subsequently, Galaxy Shopping Centre and Ichhra Shopping Centre were built. At the same time, Kohinoor Shopping Mall on Egerton Road and Crescent Shopping Mall on Davis Road were announced. In addition, new housing schemes south of Lahore also started emerging.

Lahore

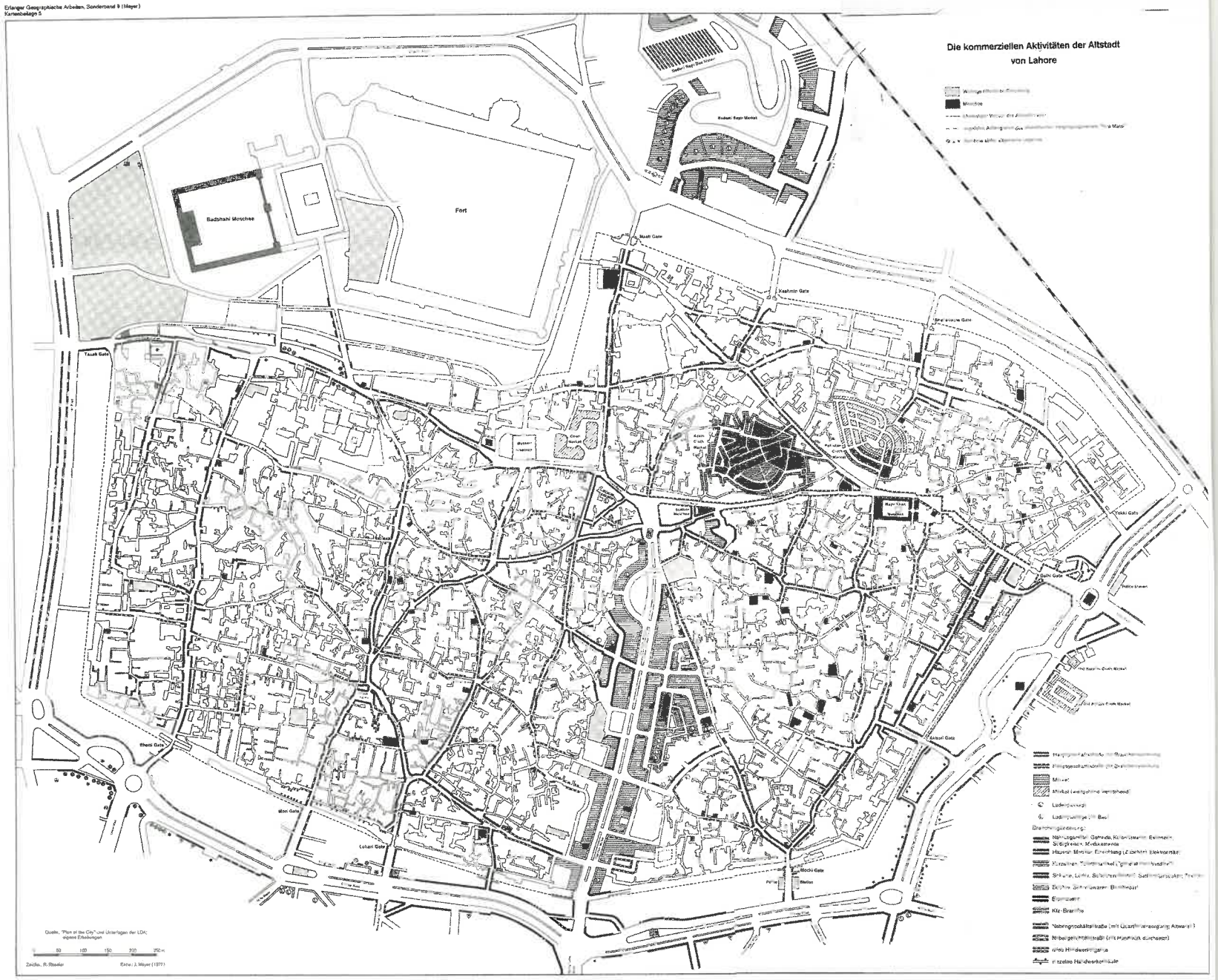
Stadtflächenentwicklung



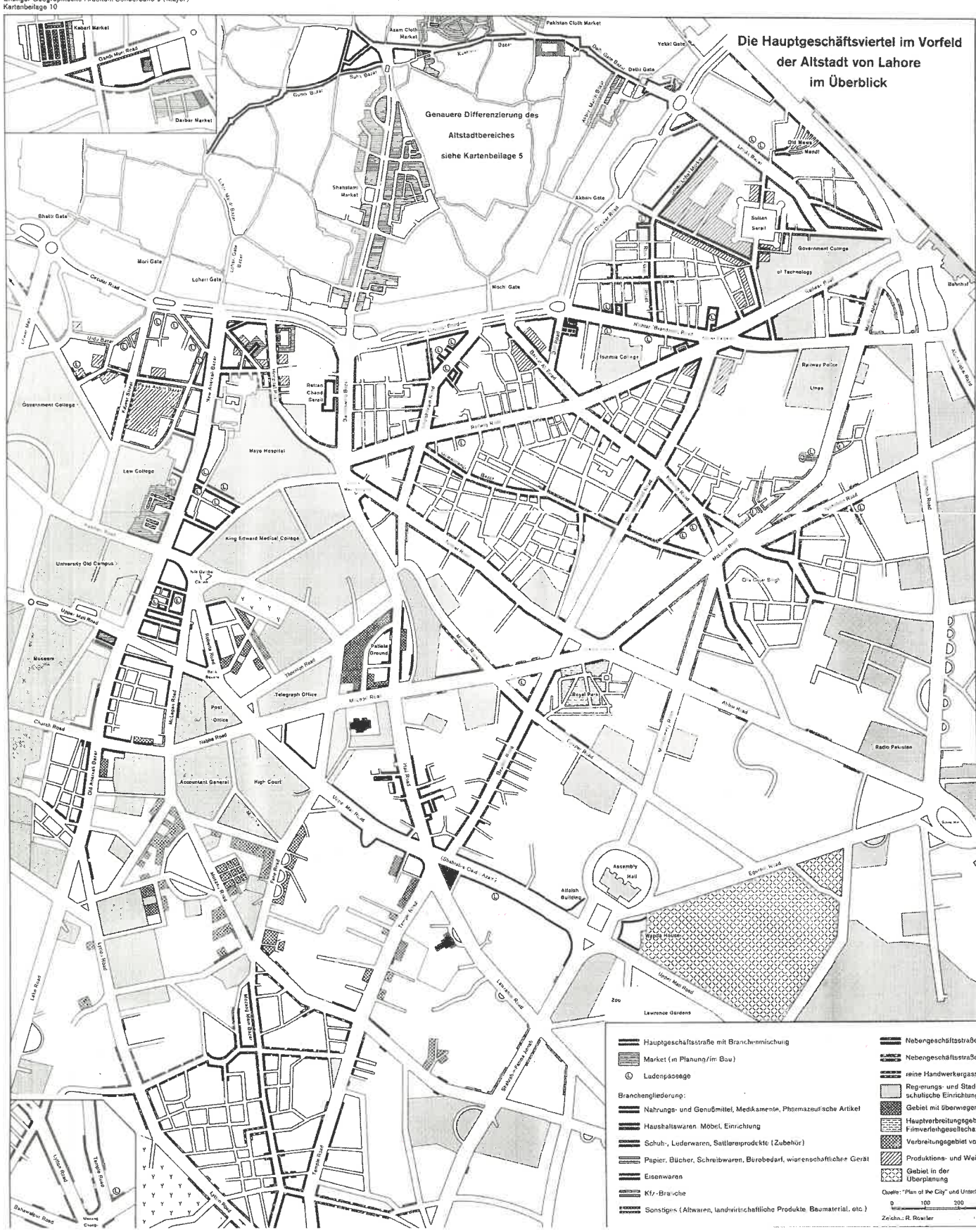
Kartenbeilage 7

Map showing Commercial Centers located on its eastern side of walled city. Azam Cloth Market & Pakistan Cloth Market.

Der Ostteil des altstädtischen Haupt-
geschäftsviertels von Lahore
(mit Azam Cloth Market und Pakistan Cloth Market)
Chowk
Wazir Khan
Delhi
Gate
Bazar
Akbari Mandi Bazar
Akbari Mandi
Yekki Gate
Delhi Gate
Circular Road
überdachte Gasse
Symbole siehe allgemeine Legende
Quelle: "Plan of the City" und Unterlagen der LDA;
eigene Erhebungen
0 20 40 60 80 100 m
Zeichn.: R. Rössler
Entw.: J. Mayer (1977)



Main Commerical Centres
inside Lahroe walled-city



Principal Commercial Centers outside the walled city of Lahore.

Conservation Plan of the Walled City of Lahore

In 1979-81, a major study, Lahore Urban Development and Traffic Study was undertaken (Lahore Development Authority: 1980). The study focused on the infrastructure and land development aspects of growth of metropolitan Lahore, with emphasis for 1981-86 on land, basic housing, social infrastructure and utilities. The study also recommended a set of immediate action projects for building rehabilitation, repair and renewal. The study recommended preparation of a conservation plan for the Walled City so that a framework could be available to conserve the architectural and historical legacy while maintaining lifestyle, economic processes and dynamics of change (Lahore Development Authority.

In 1986, Pakistan Environmental Planning and Architectural Consultants, a local public sector firm, was commissioned to undertake this task. The firm worked for nearly two years on surveys and studies, prepared and inventory of buildings of architectural, historical and cultural value and documented selected elements in the form of monographs and measure drawings.

The team of consultants proposed a wider "active" strategy with a single goal: to preserve the Walled City's manifold assets by re-establishing its interior balance as a living community in a distinct urban district of national significance with high historic and environmental qualities. The Walled City was slowly and gradually transforming into a whole-sale regional markets. To achieve the interior balance, commercial activities had to be controlled. To re-establish a living community, a better functioning social network, improved living conditions, and the attraction of middle and higher income residents was necessary. The Conservation Plan recommended a policy framework consisting of three inter-related action levels, and at each level made a number of specific recommendations for concrete interventions and these are given as follows:

1. To reduce and re-channel outside pressures outside pressures on the Walled City in order to reduce interior reorganization and protect weaker function from being overpowered by more aggressive forces.
2. To conserve and enhance the urban fabric as a whole by a combined conservation and renewal effort with due consideration of social and economic driving forces.
3. To highlight important historic areas and buildings in the Walled City by concentrated conservation effort.

Non-Residential Land use Plan of Lahore Walled City 1947

The plan also proposed specific guidelines for sectoral policies in the following areas: community development, employment and incomes, physical fabric, housing, commerce and production, traffic and transport, social facilities and infrastructure and utilities.

The Conservation Plan was based on the need for unwavering commitment to rehabilitating the Walled City and to reinstating it as a national symbol. The plan suggested eight categories of recommendations (Ali, Raza: 1990:79).

1. Strategic policies and action to be taken outside the Walled City.
2. Planning activities and studies for both the central area and the Walled City.
3. Institutional development including full utilization of existing resources.
4. Urban management and controls to include production of a "Manual for Conservation and Building Renewal".
5. Traffic improvement and management programs
6. Upgrading and enhancing the physical fabric and urban environment through upgrading the building stock.
7. Redevelopment projects in conformity with the scale, height, density and building typologies.
8. Conservation of individual listed special premises or elements.

The conservation efforts were only limited to infrastructure development and conservation and adaptive reuse of a limited number of public monuments and selected schools. However, the plan could not be fully implemented due to the lack of funding, absence of commitment and people's participation. Consequently, the markets are expanding, traffic is increasing and historic houses are vanishing with the passage of time. One of the fine outcomes of this project is publication of a book "The Walled City of Lahore." The monograph for the first time gave a complete documentation of the existing urban fabric, important monuments and havelis of the Walled City. The text is profusely illustrated with maps and drawings.

Non-Residental Land use plan of Lahore Walled City 1987

Structure Plan of Lahore

Due to the delayed approval of the plan, the Lahore Development Authority soon realized that the Master Plan was not useful to its purpose, for which reason, the so- called Structure Plan was prepared in 1980 under the title "Lahore Urban development and Traffic Study (LUDTS)". The LUDTS was conducted by a joint team of foreign and local consultants for LDA. The study was financed by credit from the International Development Agency (IDA), World Bank. The intention of this urban planning study was to provide a structure plan or guiding framework to act as a background for action programs in the metropolitan areas of Lahore for a time span of 20 years (1981-2000).

Structure Plan of Lahore (opposite page)

The LDA started implementing the Structure Plan after it was ready. The LMC, which was controlling most of the built-up parts of Lahore, however never owned and implemented this new plan. Thus the city of Lahore was having two separate plans being followed by two different organizations with overlapping functions and territories and having no appropriate mechanisms for coordination. It would be interesting to note that the said plan itself had no legal status except as a guiding document for LDA. The plan recommended a framework for action programs, neighborhood upgrading and the urban expansion project, to provide substantial improvements in living conditions for the lower-income groups. Another aim of the plan was to clarify the physical structure of the metropolis with special emphasis on the communication network and main traffic generators, the grouping of environmental areas and the general form and direction of the town's future growth. The plan also suggested the roots of urban management institutions, organization and procedures to ensure implementation of policies.

The main attraction of the plan was the development of self-sufficient neighborhoods in the south in order to meet the residential requirements of the city. The cellular structure proposed for future expansion was to take the form of mohallas existing about one kilometer apart. They would accommodate populations ranging from 6,000 for private developments to about 25,000 for lower-income projects. Each mohalla would be given a focus or center, easily recognizable and marked at the initial stage by such planned facilities as high school, mosques, etc. all within a half kilometer walking distance yet immediately accessible from the road network. Adjacent to center of each mohalla and strategically located on the road network would be an area of opportunity comprising a complete spectrum of urban activities such as public facilities, commercial and light industrial establishments, and small scale enterprises.

It was suggested that a Metropolitan areas of opportunity should be developed near the main road in Johar Town (road connecting the Shaukat Khanum Memorial Hospital to the canal) and the mohalla centre of opportunities in the entire neighborhood.

In addition, a variety of attractions were recommended near the residential areas. All types and sizes of public facilities, commercial and industrial enterprises were recommended to minimize the growth of communities. The plan also suggested spreading even traffic flow as far as possible over the main road network, especially over all existing roads linked to the south.

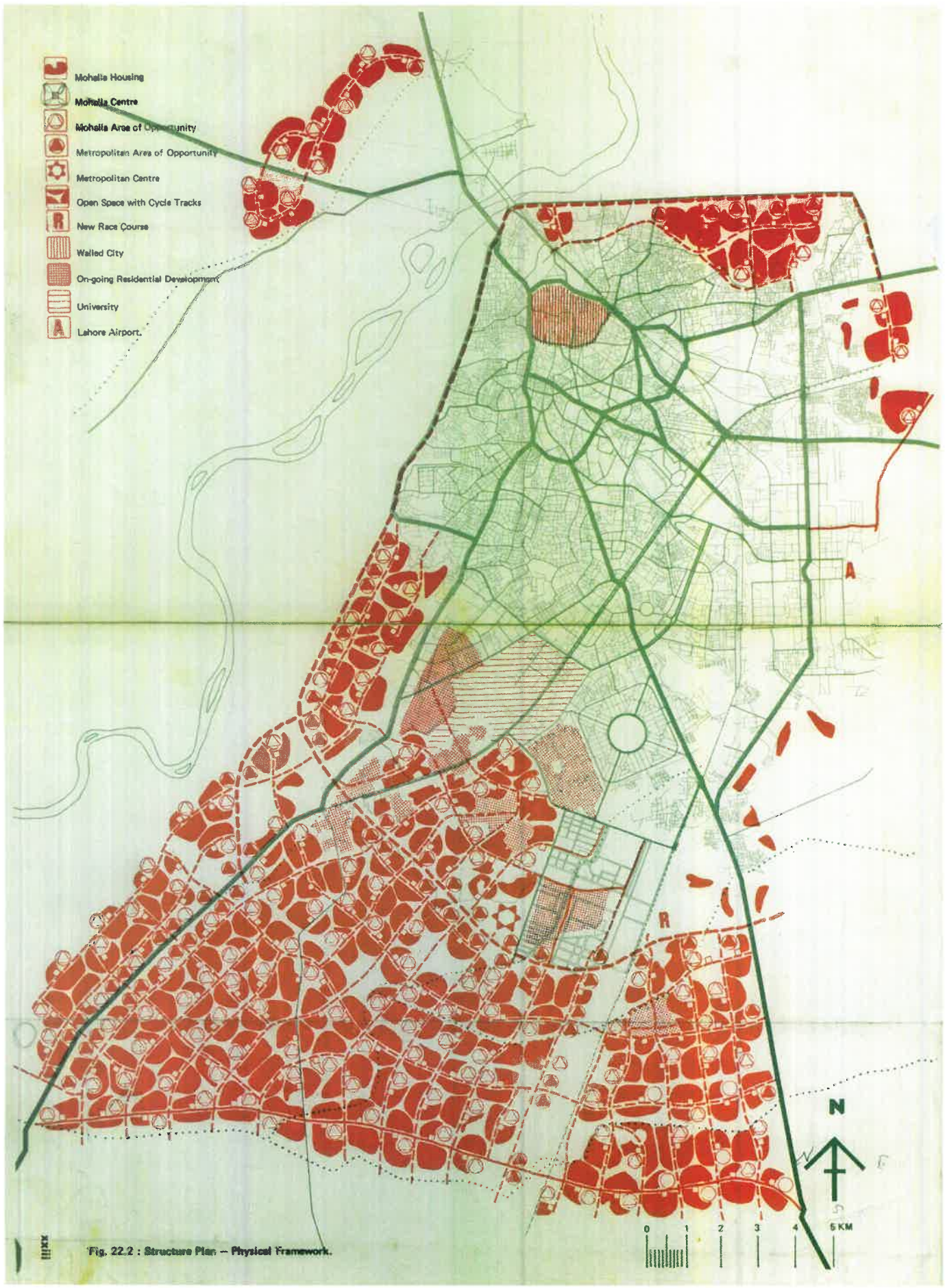


Fig. 22.2 : Structure Plan – Physical Framework.

The Integrated Master Plan for Lahore

The integrated master plan for Lahore was prepared by NESPAK, a consulting engineering firm in Pakistan. The plan consisted of three volumes. The first volume provided a complete picture of the existing situation, basic statistics and data relating to urban problems such as population, traffic, infrastructure etc. The second volume gave detailed proposals and recommendations for implementation. Volume III presented a list of different projects to be implemented in the next five years (Lahore Development Authority. 1998, III vols.).

The Integrated Master Plan of Lahore 2021 (opposite page)

The master plan was, however, extremely shallow in its approach and lacked vision for the future of this garden city. The data given in the plan had not been thoroughly analyzed, therefore, the proposals given did not provide any hope for the improvement of the existing situation. However, the recommendations for improvement of *katchi abadis* and for urban renewal/redevelopment were a good sign.

The plan mentioned rapid socio-economic changes in the metropolitan areas which had caused congestion in the central areas and suburban sprawls. It was suggested that land had to be managed more effectively. A strong need to meet the spatial needs of the existing and future population was felt. The master plan, however, did not openly recognize the continuous growth of wholesale commercial markets in the inner areas. It did not suggest any measures to relieve commercial pressures, for instance, shifting these markets to the outer periphery of the city, in the form of new wholesale markets in the suburban areas and providing them incentive through tax rebates. In this way the markets in the inner areas could be helped to shift to newer areas. The heavy incoming traffic entering the towns could also be kept away in this manner, thereby helping to avoid congestion.

The plan recognized the alarming situation of transport. It felt a dire need to link the residential areas with centers of employment, commerce and amenities and in this regard the improvement of road, transport and transportation system was suggested. The growing car ownership and urban expansion on the southern side, however, demanded an alternative approach. The plan felt the immediate need for a mass transit system rather than relying on smaller commuter vans. Thus, a Light Rail Transit was suggested. The plan also suggested improvements to roads and crossings in the first stage of its implementation. It was noticed that slow and high speed traffic was mixed up and needed complete segregation to avoid traffic delays. The strong areas of the master plan were proposals for the road infrastructure and traffic management. The future status of all important roads was discussed comprehensively. Lahore Ring Road, development of Multan Road and several other roads, including another ring road in the south, were recommended.

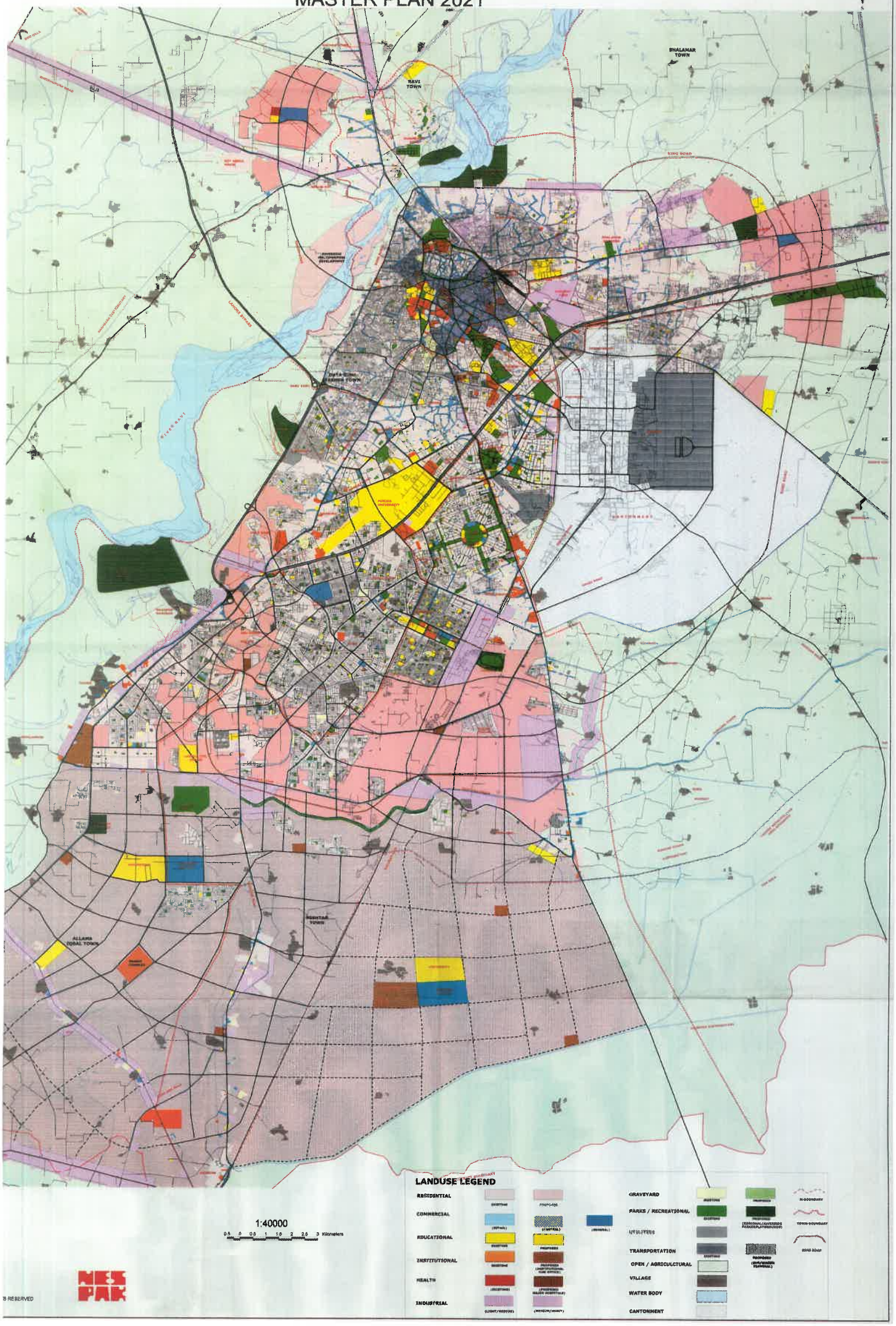
The plan suggested improvements in the environmental quality on a long term basis. The need for sustainable development of residential areas to harness environmental issues was also stressed. It was suggested that availability of potable water, treatment of sewage and its disposal in landfill sites and treatment of sewerage be ensured.

The plan also suggested that proper institutional framework be established. The present lack of coordination between different agencies operating in the same area for the provision of different services was recognized. The need for community participation at all levels was stressed. The decentralization of urban management functions and fiscal powers was also considered an important area of concern. A strong need was felt to enhance local resources, diminish reliance on public finances, and ensure effective cost recovery.

The plan discussed at length future population growth, household sizes, income levels and possible employment opportunities. Considering the need for protection of agricultural land, a consolidated form of urban expansion rather piecemeal urban expansion was recommended. Based on surveys, it was noticed that a large number of people commuted daily from different areas around Lahore located within a travel time of 90 minutes. It was, therefore, suggested that new towns may be developed as satellite towns in order to reduce movement and provide job opportunities near their place of residence. In addition, it was suggested that the private sector may be encouraged to invest in low cost housing. A typical plan for low-income housing was also recommended. The road width of 5 meters was stated as being too narrow and not qualified for better environmental standards.

The commercialization policy issues were also discussed and it was felt that there had been

LAHORE METROPOLITAN AREA
MASTER PLAN 2021



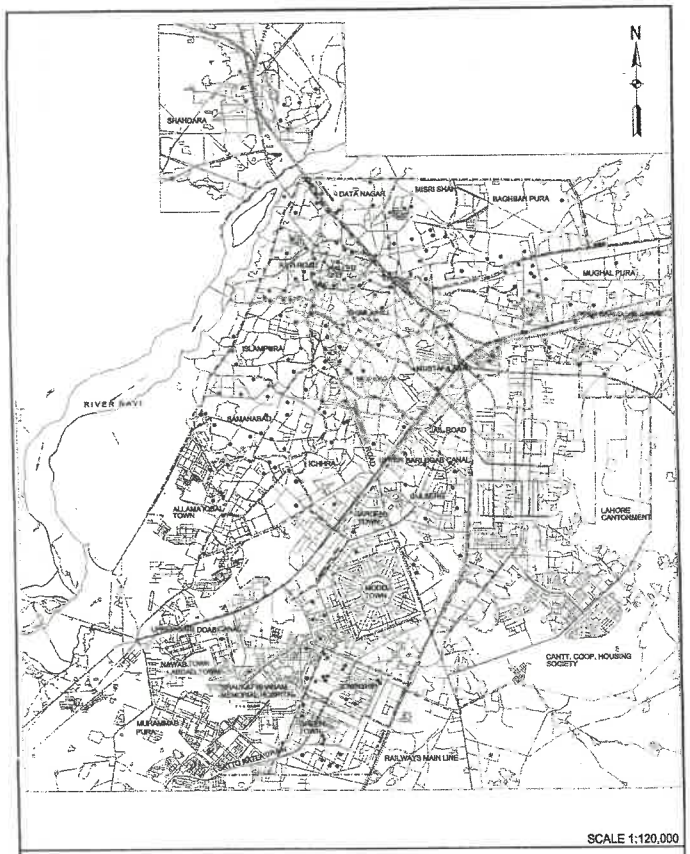
S RESERVED

a substantial increase in unauthorized construction and conversion of existing properties. The government had been charging the commercialization fee and 10% surcharge to regularize such properties. It was now suggested that there should not be any encroachment of the public right of way which was the biggest source of congestion/bottlenecks and environmental problems, incompatible with the predominant surrounding landscape. The master plan proposed different methods for commercialization of roads. Unfortunately, these policy suggestions led to corruption. Instead of commercialization of a single road, changes in the overall land-use of large areas should have been recommended. In this way inner areas could also be adapted for commercial purposes. The road fronts could be saved from car parking as well as commercial encroachments by street-side vendors.

The health, educational and recreational facilities of all levels and scale were discussed without adequate and comprehensive recommendations. The problems are different in different areas and vary from place to place. They are especially deficient in low income and high density areas and, therefore, require an alternative and innovative approach.

The master plan also lacked proposals for the restoration of storm water channels built during the British colonial period. These channels now have been converted into open sewers and traverse the entire city before falling into the River Ravi. The sewers of adjoining settlements have been connected to them thus forming a major source of environmental pollution. These sewers are breeding places for mosquitoes and all types of insects. It would have been better if underground sewers had been proposed in their place. These open channels in turn could have been filled with water drawn from the canal. This recycled water may then be used for irrigation of lawns, washing of automobiles and other similar functions. The plan was also silent on the recycling and reuse of water for large consumers and irrigation of parks and green spaces. The plan did not address the issues of conservation and rainwater harvesting at all.

The master plan was also devoid of suggestions for the construction of sewer treatment plants so that the river water may be kept clean. The towns located in the downstream consume the river water for drinking purposes. Thus in summers, a large number of people living in these towns suffer from gastro intestinal diseases.

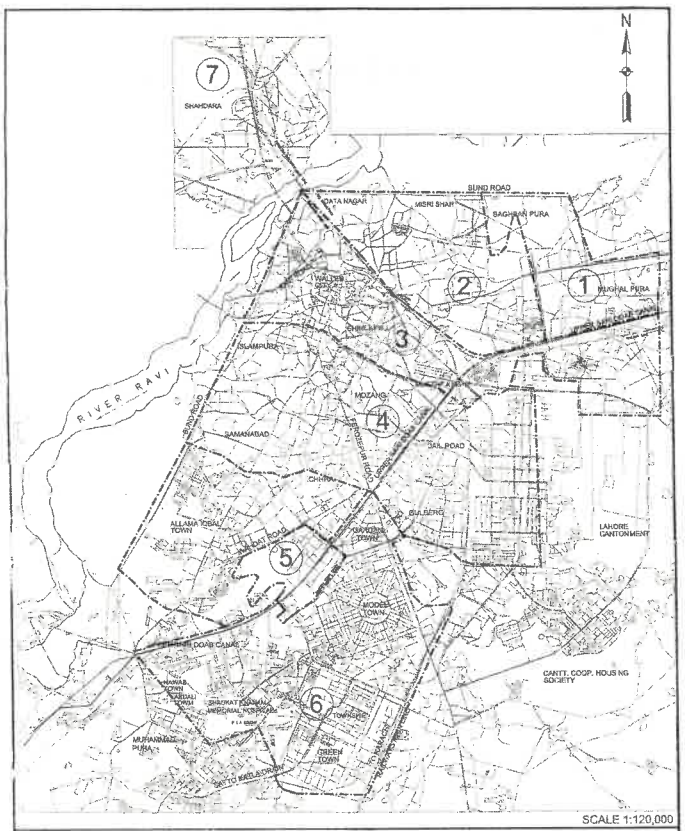


LENGEND:-

SUB-DIVISION BOUNDARY

EXISTING TUBEWELL

LOCATION OF TUBEWELLS

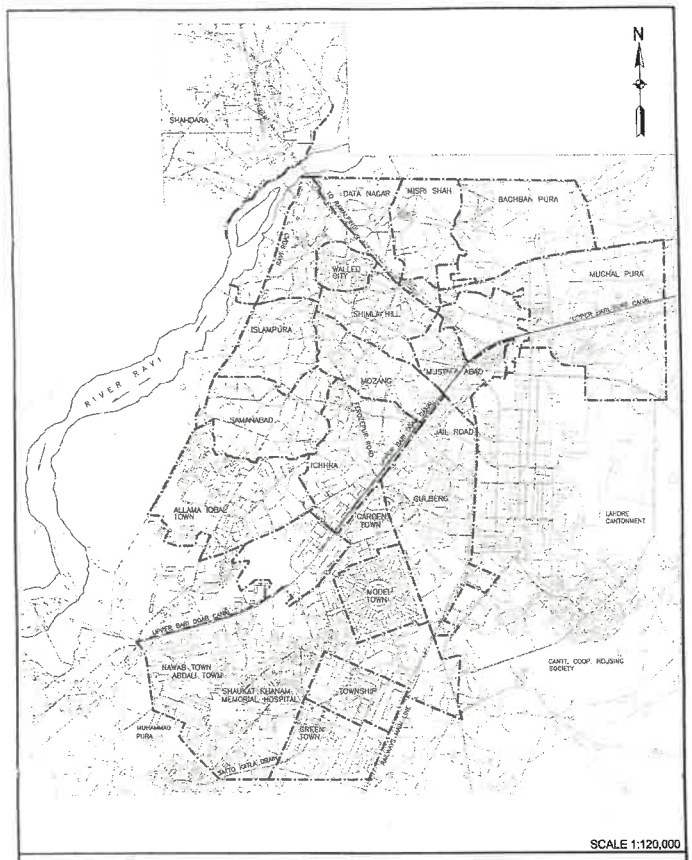


1. NORTH EAST SEWERAGE DISTRICT
2. NORTHERN SEWERAGE DISTRICT
3. CENTRAL SEWERAGE DISTRICT
4. SOUTH CIVIL LINES SEWERAGE DISTRICT
5. SOUTH WEST SEWERAGE DISTRICT
6. SOUTH EAST SEWERAGE DISTRICT
7. SHAHDARA SEWERAGE DISTRICT

LEGEND:-

DISTRICT BOUNDARY

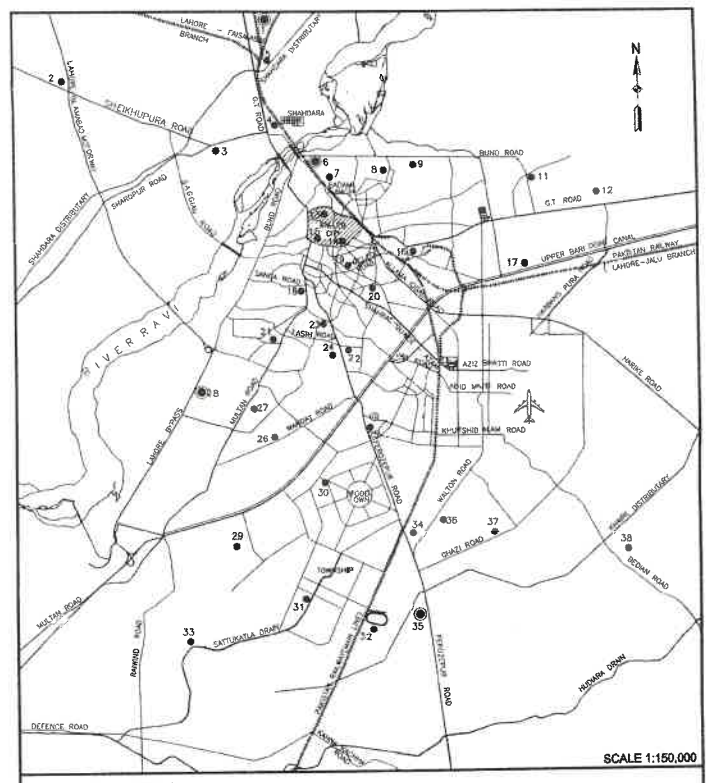
EXISTING SEWERAGE ZONES



LENGEND:-

SUB-DIVISION BOUNDARY

ZONES OF EX-METROPOLITAN CORPORATION LAHORE



GRID STATIONS:

1. United Steel
2. Green View
3. Rustam Park
4. Shahdara New
5. Shahdara P/H
6. Ravi Road
7. Badami Bagh
8. Chah Miran
9. Bhagiwal
10. Chonng
11. Shafimar
12. Batapur
13. Fort
14. Mochi Gate
15. Bhaati Gate
16. PWR
17. Fateh Garh
18. Riwaz Garden
19. McLeod Road
20. Sunny View
21. Gulshan Ravi
22. Shadman
23. Qurtaba Chowk
24. Rahman Park
25. Garden Town
26. Allama Iqbal town
27. Said Pur
28. Bund Road
29. Jauhar Town
30. Model Town
31. Township
32. Lefo
33. Wapda Town
34. Old Kot Lakhpat
35. New Kot Lakhpat
36. Wallington Mall
37. D/Colony
38. Ghazi Road

LEGEND:

220/132/11 KV Grid Station

132/11 KV Grid Station

GRID STATIONS IN LAHORE

Lahore Ring Road

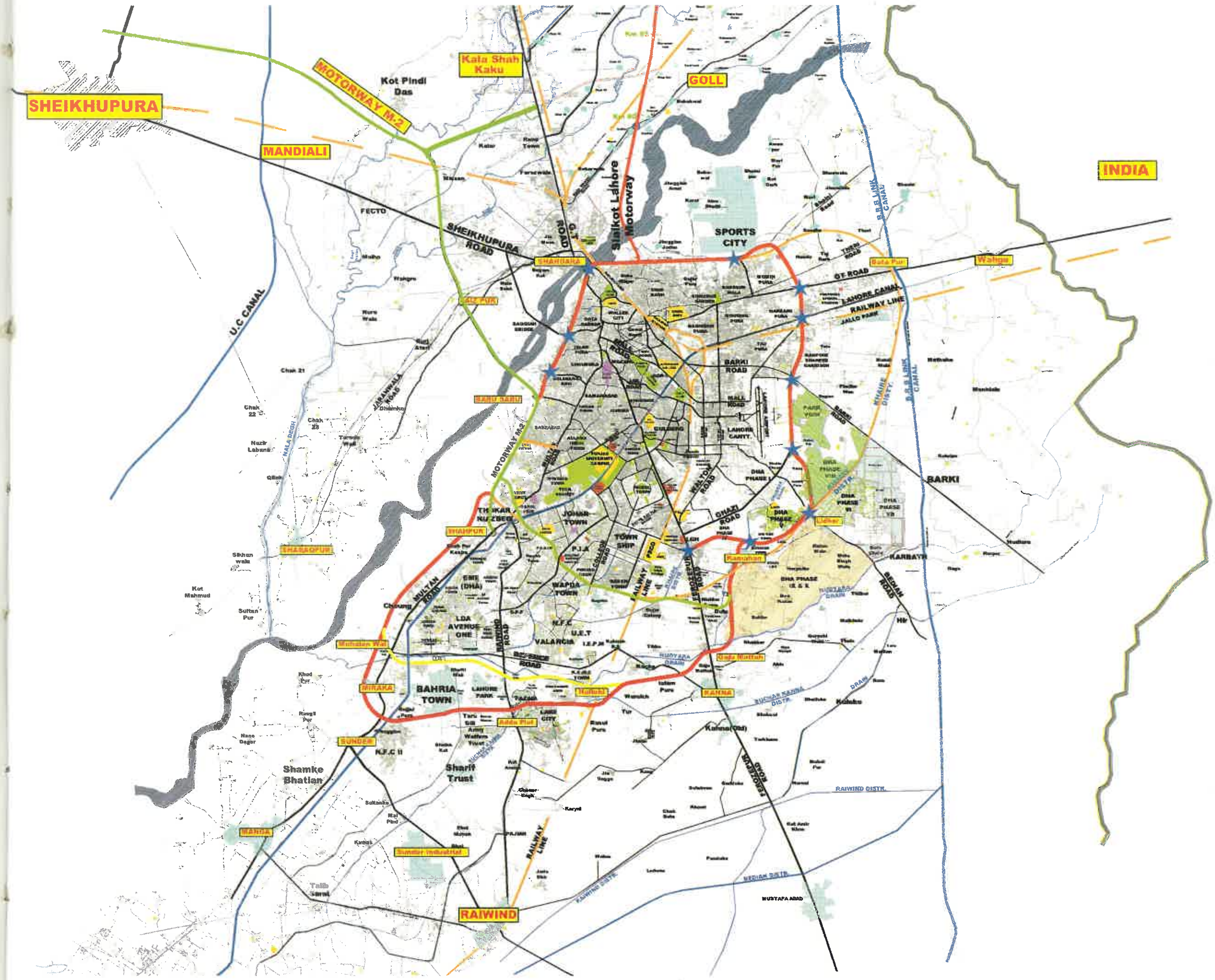
Over the last two decades there has been a substantial increase in urban traffic due to the growth of a large number of housing schemes in the south, particularly between Ferozepur Road and Multan Road. This growth led to traffic congestion and traffic jams on all major roads leading to the inner heart of Lahore. As a result, the integrated master plan for Lahore (2001-2021) proposed a 'circumferential arterial road' later known as 'Lahore Ring Road.'

The Lahore Ring Road (LRR) project was first conceived in 1984 as a bypass around the city that would ease congestion in the city. In the early 1990s, the Japan International Cooperation Agency (JICA) proposed a road loop encircling the entire city and the World Bank prepared feasibility for a 60-kilometre Ring Road. In 1995, this circumference of LRR was increased to 77 Kms when the Lahore Development Authority (LDA) included Raiwind Road in the design. Through the 90s and early part of this decade, the circumference and other aspects of the project design remained in flux and, despite its groundbreaking on December 22, 2004, continued to change. The original completion date of the project was December 2008, but construction on the southern loop, from the airport, through Defense, past Ferozepur Road to the Hudiyara Drain, the dusty little village of Halloki, Bahria Town and Thokar Niaz Beg is still underway. In December 2007 Government of the Punjab awarded the project's Southern Loop Feasibility Study and Selection of Route to NESPAK. The alignment of Ring Road got changed from time to time to meet the interests of special groups considering the high cost of construction.

Lahore Ring Road was built with two objectives in mind. The accessibility it provided would bring hitherto unexplored parts of Lahore within reach. The entire eastern and northern parts of the city would be easily accessible from other cities. In these areas commercial opportunities and potential industrial zones would, as a result, flourish. Once the southern loop is complete, there would be much ease in urban traffic coming from other areas. There is no doubt about the awesome potential of Ring Road.

The alignment of the Lahore Ring Road, as mentioned earlier, was revised a number of times. Initially this road was planned in the form of a ring around Lahore beginning from Shera Kot and moving towards Babu Sabu, Niazi chowk, Mahmood Booti, Daroghawala, Harbanspura, Allama Iqbal Airport, Ferozepur Road and finally to meet Multan Road from where it was to join the Motorway. On the Motorway one could reach Shera Kot to complete the ring. In 2005, the alignment of Ring Road was diverted northwards from Ferozepur Road near Khaira distributary and was combined with the Lahore Mass Transit Project. It was proposed that this road be turned towards Ferozepur Road and stretched up to Mian Mir drain near District Jail and then westward parallel to the drain up to Gulshan-e Ravi to join Bund Road. In a high-level meeting held in March 2006 by the Planning and Development Department regarding Lahore Rapid Mass Transit Authority (LRMTS), it was decided that the LRMTS consultants would be responsible for the design of Ring Road between Camp Jail and Canal Bank Road and the two interchanges at both these points. The Lahore Ring Road consultants were to prepare the design at-grade road between Model Town and Khaira disributary. The alignment of Ring Road was once again restored to the original. If the above mentioned scheme had been implemented, it would have created enormous problems for the city.

The construction work on the project started from Shera Kot on Bund Road and led to Niazi Chowk from where it continued up to Mahmood Booti. It then turned southwards and led to the airport. Ring Road, up to this portion, is, at present, complete and open for traffic. Bund Road between Shera Kot and Niazi Chowk was widened and a number of properties were dismantled. Niazi Chowk was the most problematic crossing in the city. With the construction of the interchange, the conflicting problems have been resolved to a large extent. According to the NESPAK, the design consultants, 19 packages of the project will cost $359 million but this cost may be as high as $1.7 billion.



Layout plan Lahore Ring Road (opposite page)

Lahore Rapid Mass Transit System (LRMTS): 2006

The transport network in Lahore is poorly developed and under-maintained. The trend in vehicle ownership growth has also accelerated over the last few years thanks to the banks leasing out cars in huge numbers. This has led to increased congestion, poor environment and degradation in the quality of life. The gravity of the problem can be judged from the fact that the total number of registered motor vehicles in Lahore in 2005 was 1.2 million as compared to 0.5 million in 1998. This is exacerbated by the diversity of the traffic mix and lack of traffic and pedestrian discipline, both moving along and across the roadway, and lumbering stationary vehicles along the roadside.

Master Plan of Lahore Rapid Mass Transit System (opposite page)

Details of Bus Rapid Transit System (page overleaf)

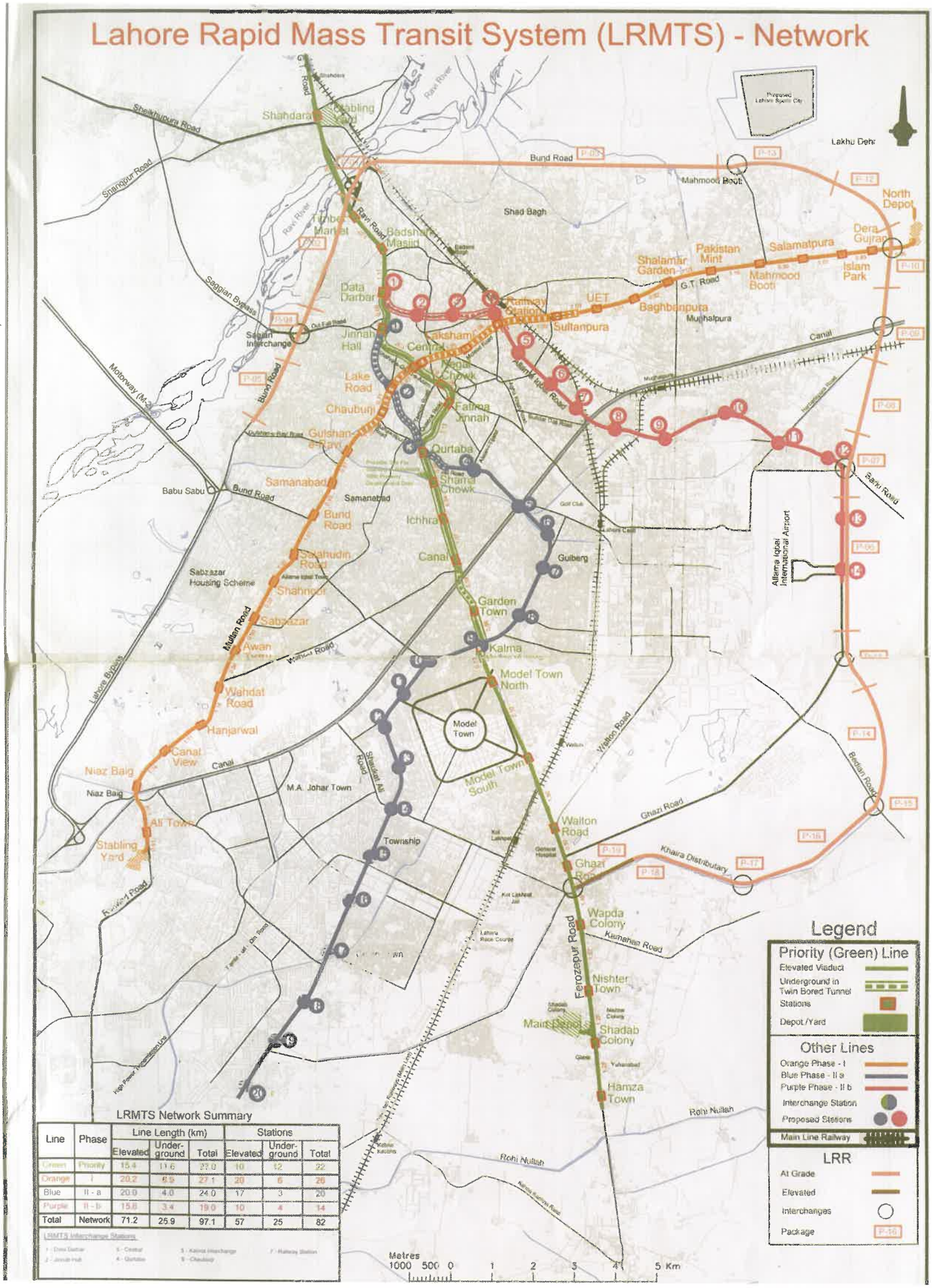
In September 2005, Government of the Punjab, Transport Department commissioned MVA Asia Ltd, through international tenders, with the view to reviewing the existing studies conducted on transportation for Lahore, and developing a network of mass transit system that could meet the future traffic requirement of the city in an economic and efficient manner. The study recommended a phased 4-line network, with Ferozepur Road line (Green) for immediate implementation. The project study was funded with the financial assistance of Asian Development Bank. The study proposed a 27-km long Priority (Green) Line, from Hamza Town to Shahdara, for immediate implementation. In the feasibility study, the consultants prepared 5% design of the Priority Line and established its viability and design parameters. Green Line is expected to cost $2.4 billion US dollars and it would extend from Shahdara to Hamza Town. The total length of Green Line is expected to be 27 km, with 11.6 km underground and 15.4 km overhead. There will be in total 12 underground stations and 10 overhead stations. The map shows the proposal submitted by MVA Asia and the lines and stations suggested on different lines (MVA, 2005).

After the completion of Green line, construction of Orange, Purple and Blue lines would be undertaken to connect all residential areas of Lahore with the mass transit system. The Orange Line is expected to cost $1.9 billion US dollars and it would extend from Ali Town to Dera Gujran. The total length of Orange Line is expected to be 27 km, with 7 km underground and 20 km overhead. There would be in total 6 underground stations and 20 overhead stations. The Purple Line is expected to stretch along 19 kilometers, extending from Bhati Chowk to Allama Iqbal International Airport. The Blue Line is expected to be 24-km long and would extend from Chauburji to College Road (Government of the Punjab, Transport Department, 2006).

The project was stalled with the change of Government. The intention was to complete the project on economical terms. Therefore, in May 2011, an agreement was signed between the Punjab government and Norinco Company, China, to construct Lahore Mass Transit Project at a finishing cost of US$1.7 billion. According to the agreement, 80% of funding will be provided by the Chinese firm without any mark-up.

At present (2012), the Rapid Bus Transit System project is being implemented from Gaju Mata to Shahdara on green line mentioned earlier. The entire length of the corridor is 32 Km out of which 7.5 Km is in the form of flyover from P.C.S.I.R. to Pir Makki. Once completed, it will change the entire landscape character of Lahore. The flyover as well as high railing on the both side of surface track is neither environmentally friendly nor aesthetically pleasing. It will eliminate the visual pleasure of the roadscape.

Lahore Rapid Mass Transit System (LRMTS) - Network



LRMTS Network Summary

Line	Phase	Line Length (km)			Stations		
		Elevated	Under-ground	Total	Elevated	Under-ground	Total
Green	Priority	15.4	11.6	27.0	10	12	22
Orange	I	20.2	6.9	27.1	20	6	26
Blue	II - a	20.0	4.0	24.0	17	3	20
Purple	II - b	15.6	3.4	19.0	10	4	14
Total	Network	71.2	25.9	97.1	57	25	82

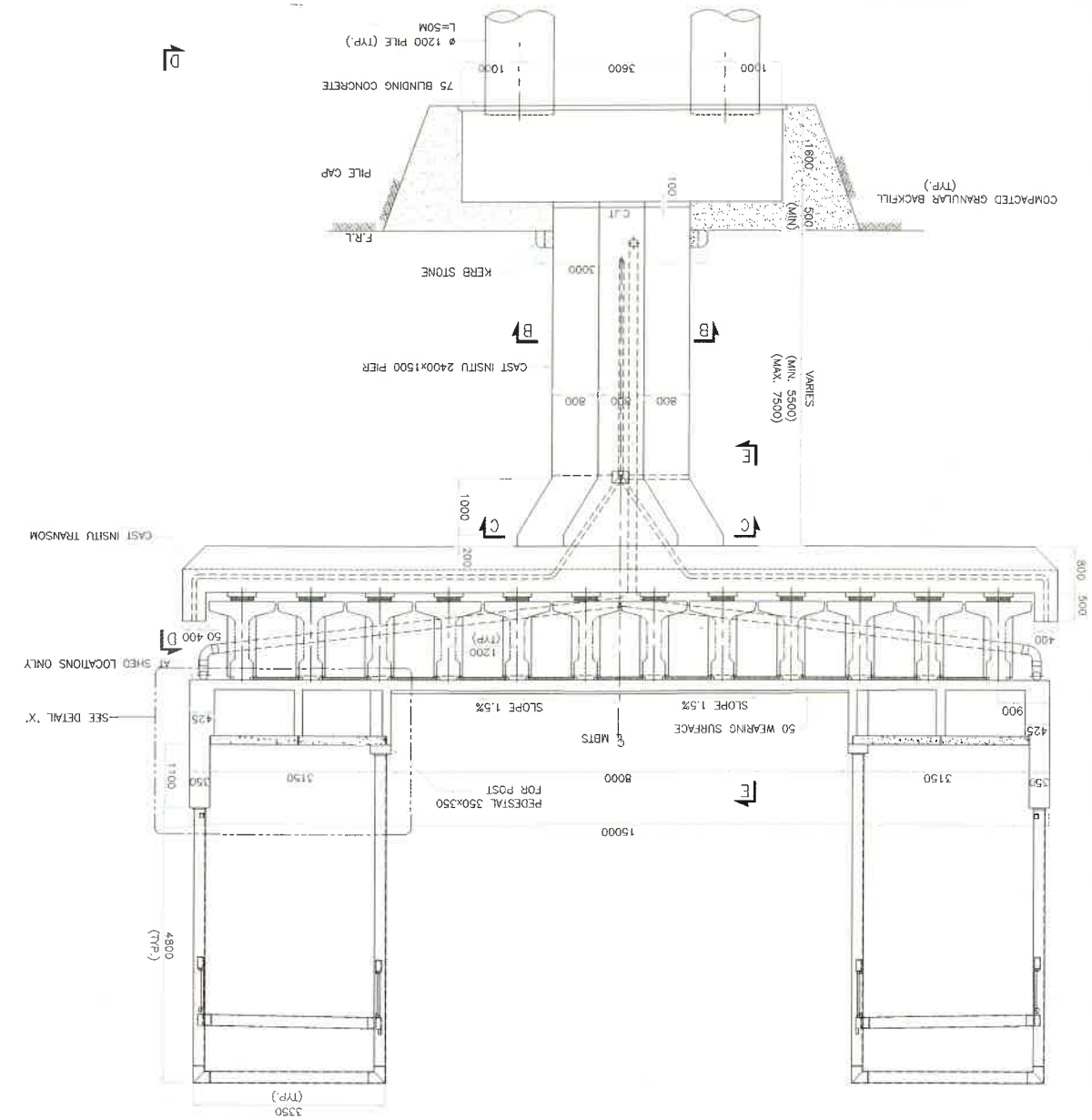
LRMTS Interchange Stations

1 - Data Darbar 3 - Central 5 - Kalma Interchange 7 - Railway Station
2 - Jinnah Hall 4 - Qurtaba 6 - Chauburji

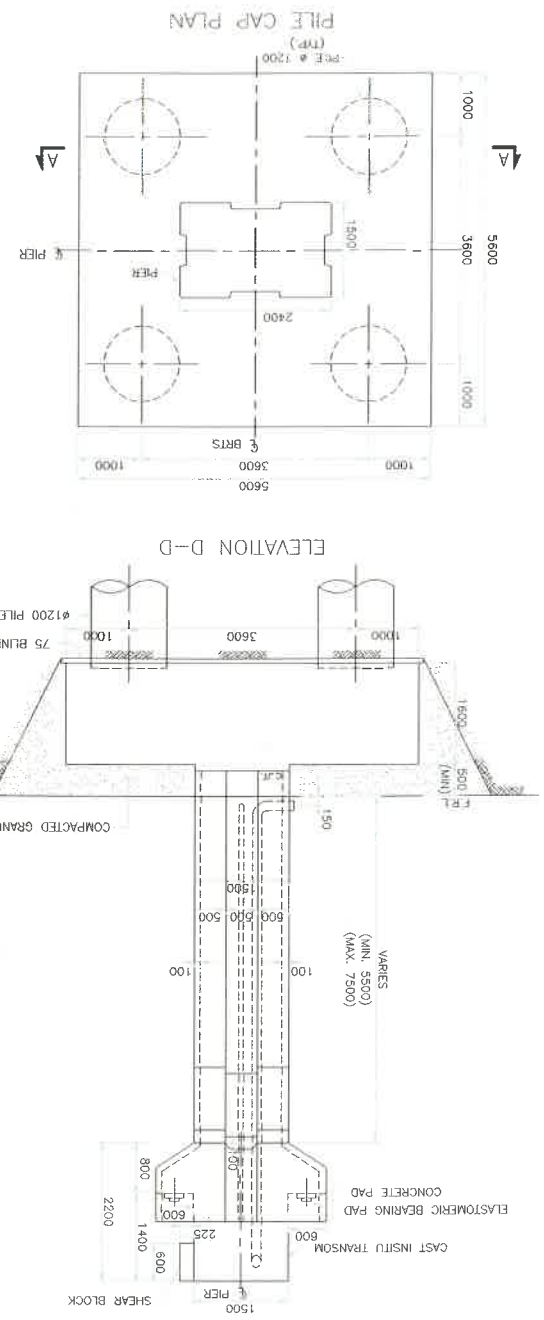
NOTES

1. FOR GENERAL NOTES REFER DRAWING NO. G001.

TYPICAL CROSS SECTION

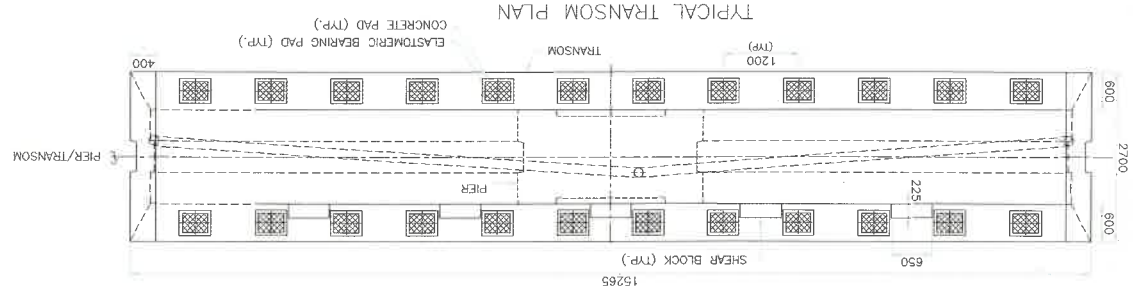


PILE CAP PLAN



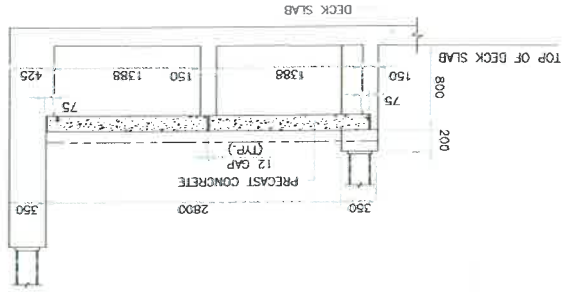
ELEVATION D–D

TYPICAL TRANSOM PLAN



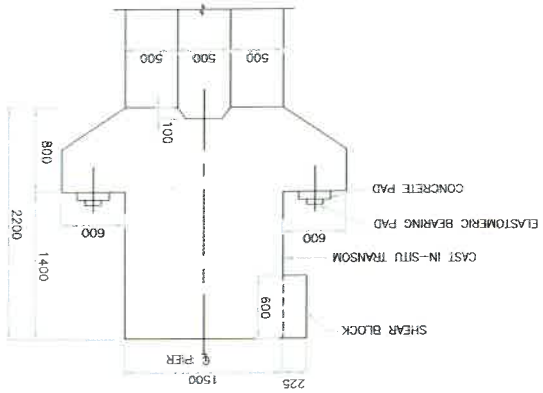
DETAIL 'X'

SCALE 1:30



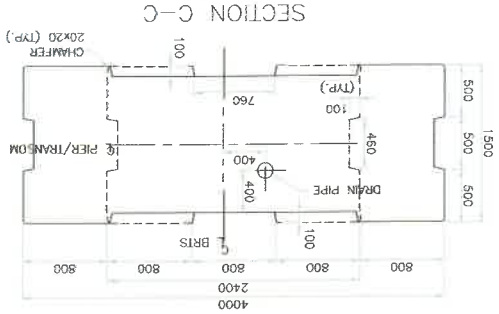
SECTION E–E

SCALE 1:30



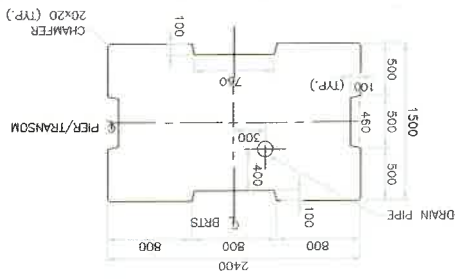
SECTION C–C

SCALE 1:30



SECTION B–B

SCALE 1:30



The city of Lahore is growing at a tremendous pace, much faster than perceived by the development authorities. The city which used to be a city of gardens is now gridlock of cars and densely built-up areas. A city that would provide safe water and boasted high levels of clean air now has arsenic contents found in its water, and is full of noise and air pollution. The city that was once pedestrian-friendly for all age-groups now rarely offers any walking space. One of the special qualities of Lahore was that it had some fine examples of urban design; it is now devoid of such quality spaces.

The quality of built environment which existed during the British period cannot be imagined in the present day. This is because the architects who understood building and the built environment were tasked with controlling all architectural development. The Consulting Architect as Secretary of Lahore Improvement Trust was shouldered with the responsibility of watching over the main roads and open spaces of Lahore and preventing their being exploited for other than public interest. Prior to that in 1917 on the recommendation of the Public Works Department Organization Committee, he was also given responsibility of the structural charge of buildings designed by him and within easy reach of Lahore (1925-26)

Over the years, Lahore has faced serious challenges of urban design. Urban design is three dimensional physical design which is not concerned with the buildings only but also with the spaces around them. The feeling of safety and danger, odor and physical comfort are its prime concerns. Urban design is also very concerned with the social and cultural milieu of spaces which make up the environment. The nature of such activities very much creates an identity of the space, the land-use pattern, language of architecture and grammar of ornamentation, and the nature of landscape give a distinct character to the space and built environment.

The city of Lahore is the tale of three cities i.e., pre-colonial, colonial, post-independence. The urban patterns, structure and forms are distinct in each historical period. The places of the Walled City are based on natural or organic order. The management of the built environment was being looked after by the kotowal. However, the design of individual buildings was handled by the mimar. The physical design of each building was based upon the functional requirements of the owner, thermal comfort and privacy from the neighboring structures since most of the buildings were surrounded on three sides by other structures. However, the layout of the streets was done by the community with mutual consent.

The land-use pattern within the Walled City was highly articulated. The specialized bazaars were located on the main thoroughfares connected with the gates while the streets were quiet and provided access to the mohallas (neighborhoods). The planning of the neighborhood was in line with the new theory of urban design by Christopher Alexander. The varying sizes of streets, and houses were equally distributed throughout the town. Equal amounts of investment on buildings and uniform land-uses made it highly functional. The equal distribution of rich and poor and homogeneous distribution of people in terms of religion, caste and profession made it very functional and efficient. The spatial and functional hierarchies complemented each other. The major streets or kuchas were semi private or mainly used as circulation corridors, primarily used by men. The public wells and mosques were located on the primary streets. The tertiary streets or bund galli's were the female domain. These were meeting and chatting places for ladies. The open spaces and gardens were located outside the Walled City and all major fairs were held in the suburban areas in the tombs, shrines and open spaces around the city.

In terms of architecture, besides application of complicated geometry and a proportion system, the context too was given complete respect in physical design. The concept of encroachment of public domain was remote even in minute details. The steps never protruded beyond property line and lighting niches were designed at locations which helped people to move comfortably at night. The concept of equality prevailed. The principles of mutual respect and care provided the foundation for neighborhood planning and architecture; the owners of large houses or havelis let their houses open to the less effluent in case of need. This mutual cooperation existed among all

strata of the society. In short, the urban design profession was controlled "by the people for the people."

There was a sense of surprise at all levels in the built environment. The bazaars were never straight nor the streets. The turns and varying widths provided elements of surprise. The views and vistas created by such architectural devices maintained a continued interest and provided a visual dialogue between the buildings and the passersby.

The British introduced a new bureaucratic management system for the development of Lahore. The nature and development of Lahore maybe divided into two phases. The first phase spread over the second half of the 19th century in which the roads were laid out by the military engineers and the houses of the masses were developed by local architects. The elites and Europeans constructed bungalows leaving open spaces all around the buildings. The commoners developed their houses immediately in the south and southeast of the town and the areas between railway roads and McLeod Road became the nucleus of urban development. The streets were laid straight according to the Municipality Act of 1867 and two to three-stored high houses were built on an indigenous pattern. In these areas, long linear streets with houses attached to one another were a common feature. The street width varied from 12 feet to 20 feet. Architectural style combined all local and European design features. Green spaces were limited and all open spaces were left within the neighborhoods without formal landscaping. The Mughal period shrines and mosques were incorporated in the physical design. These shrines also had open spaces around them and contained a few native trees where common people used to sit in shade during the hot summer season. Municipal water supply and sanitation facilities were extended in these settlements.

The houses of the Europeans and elites were built between The Mall and McLeod Road. This area contained large and medium sized bungalows with open spaces all around them. Donald Town contained numerous trees planted in the front lawns of houses. More trees were planted along either side of the roads or in the median of all major roads. The houses were almost single-storied; the population and construction density was extremely low compared with the new indigenous settlements. These bungalows were either designed by engineers or locally trained architects.

The beginning of 20th century was a turning point in which the role of an architect became much more crucial. With the introduction of a more comprehensive Municipal Act of 1911, every owner of a plot was bound to submit building plans for the approval of the Municipal Committee. The Improvement Trust Act and the establishment of the Lahore Improvement Trust imposed further checks on the urban growth of Lahore. The Municipal Committee was asked to submit large schemes to the Trust for approval. The consulting architects to the Government of Punjab prepared most of the important urban design schemes. This created their lasting impression on the built environment. The layout of major crossings and urban design schemes of important squares were handled by Sullivan. In such areas, he designed buildings for both government and clients to achieve a meaningful built environment having both quality and character. In this case the Charing Cross scheme and Prince Albert Victor scheme (Nila Gumbad area) can be cited as important examples. A true and meaningful urban space with a strong architectural character can only be created if there is a single architect who is preparing the layout and designing the buildings around it.

The other important contribution in the second quarter of the 20th century was the design of new indigenous schemes where a minimum road width was fixed. It was made mandatory that the majority of the houses must be open on two sides. Such measures were taken to ensure maximum light and ventilation for each house. Similarly for bungalows, a minimum width of open spaces all around the building was also fixed. The construction of footpaths for pedestrians was given a priority and these were actually built in all newly-developed areas of the town.

The encroachments were strictly controlled everywhere including the Walled City. Comprehensive mapping was undertaken and detailed proposals were prepared for urban improvement. For the first time conservation proposals were prepared to improve the quality of life in the historic Walled City. The urban expansion all over Punjab led to the creation of the post of Town Planner. He was vested with the responsibility of preparing the master plan for Lahore and designing or scrutinizing proposed schemes. But the dominating role of consulting architects remained crucial throughout the first half of the 20th century. This is the reason why we admire

the quality of urban spaces in colonial Lahore.

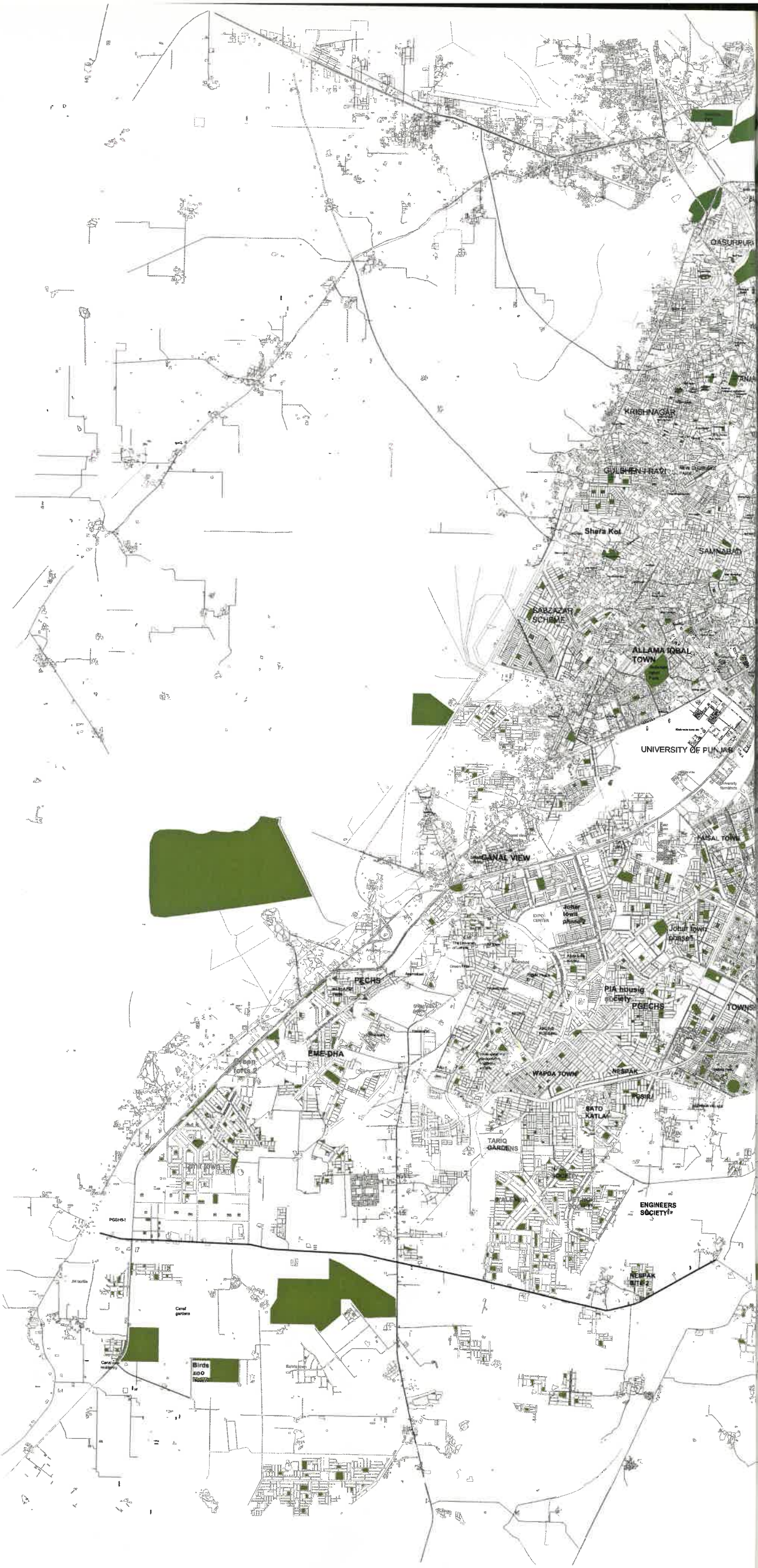
The history of urban development of post-independence period of Lahore is not very alluring. The urban design traditions of the past were completely wiped out. The role of architects in developing the character and image of the city was passed on to town planners who neither understood buildings nor the contextual issues of built environment. The primary role of town planners is to frame demographic policies, and tackle urban economics and overall issues relating to the structural organization of the city. The detailed design of the buildings, streetscapes and the overall urban environment is the domain of architects. From independence up to the present day, the role of architects has been marginalized to a large extent. The building control and the approval of the building plans have been given in the hands of the town planner. Over the last sixty years, there has hardly been any space where architects are given the opportunity to prepare urban design proposals. This is why post-independence Lahore is aesthetically characterless, non-responsive and lacks robustness.

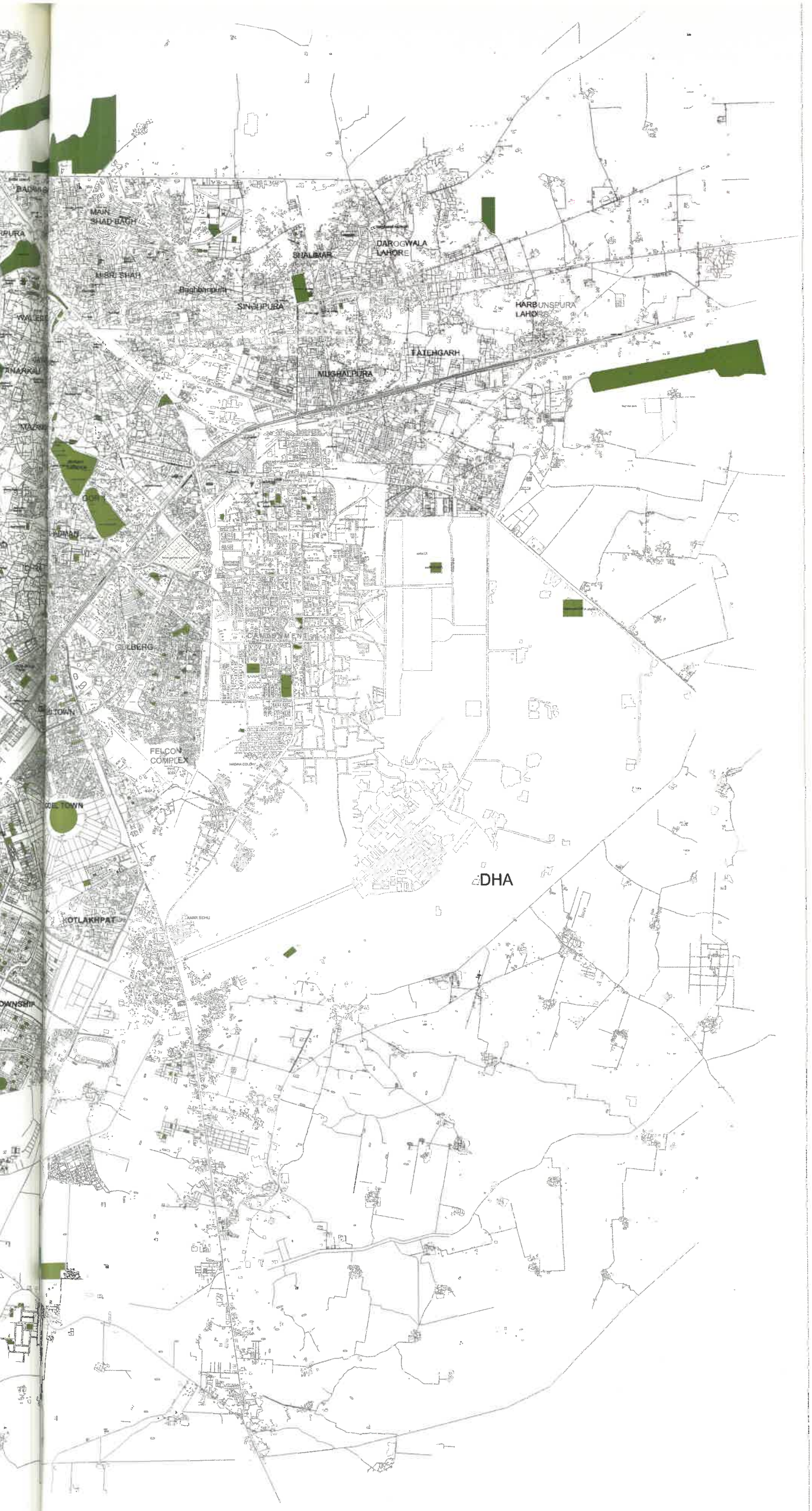
There is a serious urban governance problem in Lahore. In 1984, Lahore Improvement Trust was upgraded to Lahore Development Authority to address the problems of urbanization, urban agglomeration and improvement of landscaping. All major roads and newly-planned schemes were, therefore, handed over to LDA. The historic indigenous settlements, Colonial period housing for low-income groups remained in the jurisdiction of the Municipal Corporation. The two organizations have parallel lines of work but operate independently in different areas. LDA is a strong administrative body but Lahore Municipal Corporation is politically active as it has elective members from the general public. In addition, the Cantonment Board and Defense Housing Authority also hold significant areas which are governed by their own rules and regulations. The lack of coordination amongst them has led us to a situation which is not only the worst in history but is also becoming increasingly complex. The Water and Sanitation Agency has its own boundaries and does not include the Cantonment and DHA. Similarly the Park and Horticulture Authority (PHA) has its own administrative boundary for parks and greenbelts along major roads but it does not operate either in cantonment or DHA. The Model Town Cooperative Housing Society is yet another area which has its own geographical limits and maintains all development activities within its own areas of jurisdiction. Each of the above mentioned societies have their own byelaws and building control departments. The architects are required to take separate licenses in order to practice in each department. The private housing schemes developing mostly in the southern and eastern sides of the city are also run independently by cooperative societies.

Cities are living organisms; they flourish, prosper and decay with the passage of time. The constant evaluation and monitoring of their proper growth and addressing of various problems arising due to different human interventions are extremely important. The cities function similar to the human body, possessing heart and arteries. The administrative and socio-cultural areas are considered to be the heart of towns. And roads and streets leading to it are considered arteries. If the arteries get blocked, they could affect the heart and if the heart is in trouble, the whole infrastructure collapses. Therefore, rejuvenation and conservation of the heart and arteries need to be undertaken constantly. This can be done by relocating certain inappropriate elements and adding some useful elements. Similarly the problems in arteries may also be looked into and their solutions may be sought so that they remain unobstructed. The present policies of commercialization of major arteries in town place extra pressure on the heart creating further deterioration. There is dire need for revision of land-use policies of the entire town rather than targeting specific areas for financial benefits. Commercial areas need to be evenly distributed and located closer to user groups. The wholesale commercial centers from historic quarters may be relocated beyond the urban area along the major highways where ample parking facilities could be provided for incoming traffic. This will have two advantages. Firstly we can remove unwanted heavy traffic and secondly we can bring back the original glory of this historic city.

Another important area that needs to be addressed immediately is the conservation, recycling and adaptive reuse of historic and cultural properties. In the Walled City, historic houses are being pulled down to construct multistoried structures to accommodate small ateliers and warehouses associated with wholesale markets. Similarly the land-use pattern of protected historic properties under the Antiquities Act of major arteries of colonial Lahore such as The Mall and McLeod Road are being transformed. The transformation is in two forms, the buildings are either completely altered or saving the façade the rest of the structure is pulled down. The floor-to-floor

Garden & Green spaces in Lahore

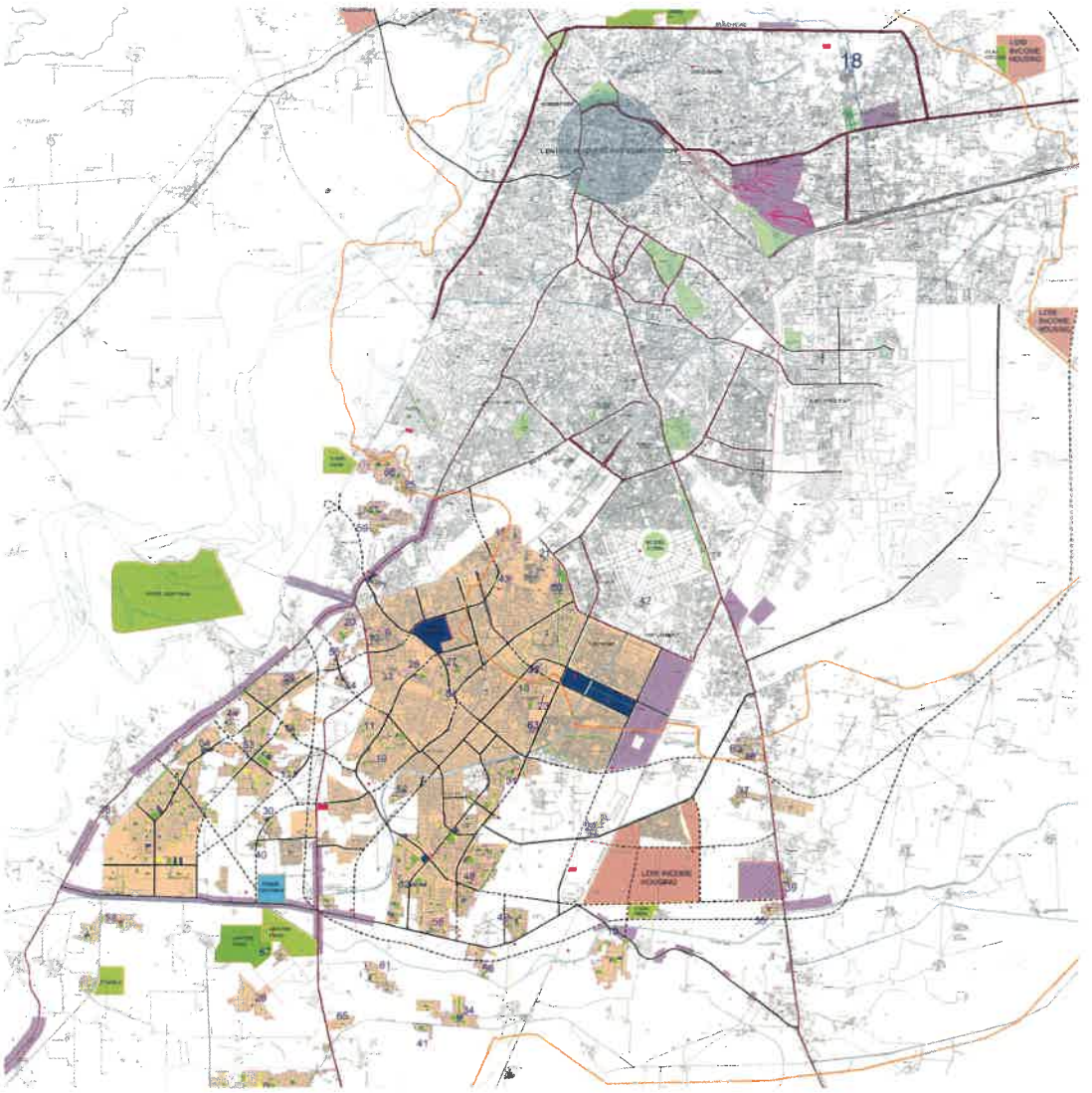



MAIN
SHAD BAGH
SHALIMAR
DAROGWALA
LAHORE
MISRI SHAH
SINGHPURA
HARBUNSPURA
LAHORE
FATEHGARH
MUGHALPURA
GULBERG
CANTONMENT
FELCON
COMPLEX
DHA
KOTLAKHPAT

height of historic structures was almost double in many cases compared with modern houses. These actions generate two basic problems. Firstly, historic properties as well as their feel are being lost. Secondly, the creation of more useable space by changing land-use character invites more people, which leads to congestion, agglomeration and pollution in urban environments.

Although a complete list of protected monuments has been given in the master plan, proposals to protect and improve heritage zones and heritage trails have not been considered. The concept of urban conservation is only limited to the Walled City of Lahore where work on a heritage trail is in progress. Important monuments outside the Walled City are, however, in constant threat. The encroachments are fast growing even around the world heritage sites. The Shahdara Complex of monuments has been heavily encroached upon and this is the sole reason for not been included in the world heritage sites. Shalamar Gardens was declared a monument under threat. A similar situation exists for other national monuments.

The solution to urban traffic and consequent congestion in Lahore does not lie in the widening of roads but it rests with the better land uses and mass transit facilities. The major work places and business centers lie on the northern side of The Mall. These administrative and business centers are located in an area of four kilometer squares. In the morning the population commutes northwards and in the afternoon the entire traffic moves southward. The poor public transport facilities, increasing number of cars and slow moving public transport such as mini vans, Qinqchis



Central Business and Adminstrative District attract and release traffic during peak hours creating urban conjuction

and rickshaws create enormous congestion, generate noise as well as air pollution.

There has been a mushroom growth of private offices, clinics and private schools in almost every housing society. These are located mostly in single or double-storied houses and lack parking facilities. Therefore, cars are parked on the roads, which creates congestion in the urban environment. Especially leading English medium private schools located on primary roads such as Canal Bank Road, Zahoor Ilahi Road, and Durand Road create a serious traffic blockage. This is one of the more serious examples of violation of land-use where pedestrian-oriented residential

settlements are transforming into vehicular streets. These offices can be shifted to new special zones to be created for multistoried office buildings with adequate parking facilities. Such zones may be spread in different directions to accommodate clients living in respective areas. Similarly, spaces for schools are insufficient in modern housing schemes. The original character of the housing schemes needs to be reverted to. These violations of land-use go completely unchecked by the development agencies. The master plans are silent about these problems as well.

Cities are in dire need of more naturalized surroundings in the form of urban green spaces where citizens can experience a wealth of positive physical and psychological sensations, allowing them to communicate better with one another and strengthen their social ties. Urban green spaces includes the open spaces like green belts, corridors, road verges, public parks, community gardens, home lawns and private gardens, commercial scapes (shopping malls, hotels) and urban woodlands. Coined benefits of urban green spaces are relaxation, peacefulness, seasonal change, scenery and educational platforms . Good quality of green space enhances the quality of urban life and contributes towards an improved sustainable neighborhood renewal and better community cohesion. Social interaction in open spaces offers an opportunity to be with other people in a relaxing and undemanding way. Social contacts in (Urban green spaces) can provide a source of information about the social world outside and inspiring impulses to the isolated group of dwellers. Less green space in people's living environment coincided with feelings of loneliness and with perceived shortage of social support. To be effective and sustainable, both individual and community resources need to be developed and used within the context of four guiding principles; equity, social inclusion and interaction, security, and adaptability. In Lahore there is not much effort to create more green spaces at the outskirts in the form of small forests, cycle tracks and parks system and playing fields. In addition, the green belts along the roads and road plantation are also missing.

The youngsters are very much interested in jogging and cycling, but facilities for such activities are absent everywhere in the town. The jogging facilities only exist in large public parks. There are some groups of youngsters who do cycling only on Sunday mornings when the traffic on the roads is far and few between. Such facilities may be incorporated in future redevelopment projects and housing schemes. These linear greenbelts will provide oxygen as well as recreational facilities to the residents. These facilities are not envisioned in the current master plan.

Water and sanitation is another matter which needs special attention. The present condition of water resources is getting worse day by day. It is therefore, important to take care of the existing resources, and develop new resources by adopting a holistic approach to safeguard our environment. This situation is partly due to neglect and partly due to the bad policies. With the economic development, urban expansion is taking place in all major cities of Pakistan. A key issue related to quality living lies in the sustainable development which can be achieved through the provision of safe infrastructure facilities such as water, power, sewerage, drainage and solid waste, management. For sustainable development of Lahore, it is essential to ensure an adequate supply of water in terms of reliability, quantity as well as quality. It is imperative to not only initiate new projects and upgrade present infrastructure, but also to promote water conservation through an integrated and community driven model, comprising short-term and long-term measures. There has been a total lack of regional approach to sustainable distribution and use of available water. Thus water should be conveyed from areas where water is abundantly available to the areas where there is a scarcity.

Ground water recharging should be facilitated through rainwater harvesting, conserving water bodies and controlling groundwater extraction. Groundwater extraction can be controlled and managed through registering boreholes. Focused planning and action is required to prepare and implement rainwater harvesting schemes, with the aim of not only optimizing water use but also recharging groundwater tables. For this purpose, suitable mandatory provisions should be made in the planning and construction of various schemes. Arrangements should also be made to cover up or close open drain sewers which send untreated sewage to ponds where the water is thick, and reeking of ammonia and other noxious odors.

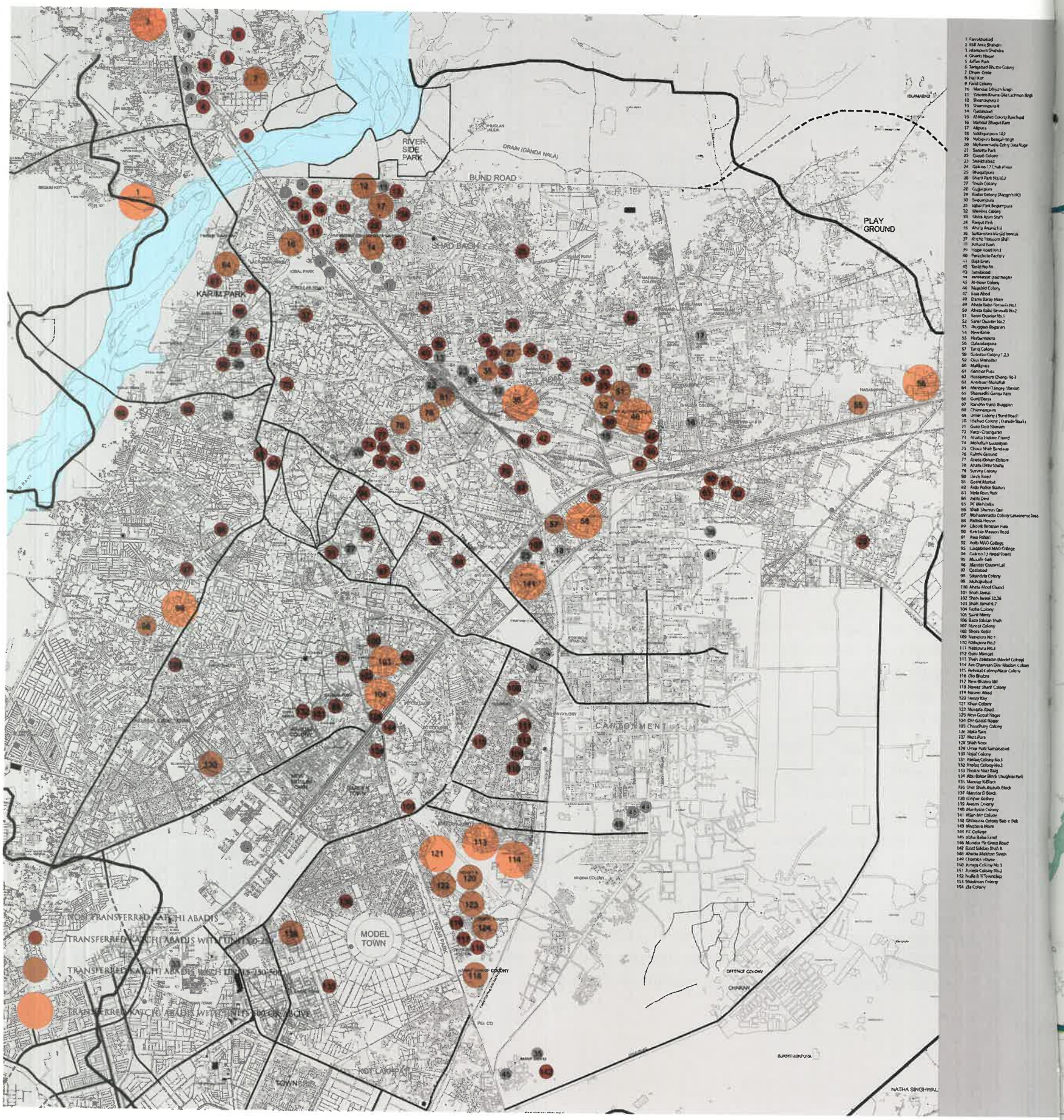
Furthermore it is vital to identify all potential surface water sources, ground water aquifers and inter-basin opportunities for transfer of water to the region. This should include water mapping, capturing the monsoon run-off, rainwater harvesting, re-use and recycling of waste

water and measures for conservation of water. It should also ensure the conservation of natural depressions, water bodies, flood plains, aquifers and should also contribute to maintaining the ground water table. Major water bodies can be developed as places of tourist interest/picnic and the ground and aquatic life that once used to be a part of urban ecology, can also be brought back at such sites. It is said that the River Ravi used to be a habitat of about forty two species of fish and bird life, which migrated to other areas due to pollution and water shortages in the Ravi. This solution could also make such water bodies sources of revenue while ensuring their protection and drainage. The waterfronts of all such water bodies, drains, ponds and canals should be landscaped which would not necessarily require elaborate gardening but a simple and natural stretch by itself would be equally important for the environment and ecology. Water bodies/lakes may be created along the entire length of the Ravi from Siphan to Bhai Pheru. These lakes will provide recreation areas and help water recharge. In addition, thick plantation may be ensured to transform these areas into special ecological zones.

Green Belts in Lahore (page overleaf)

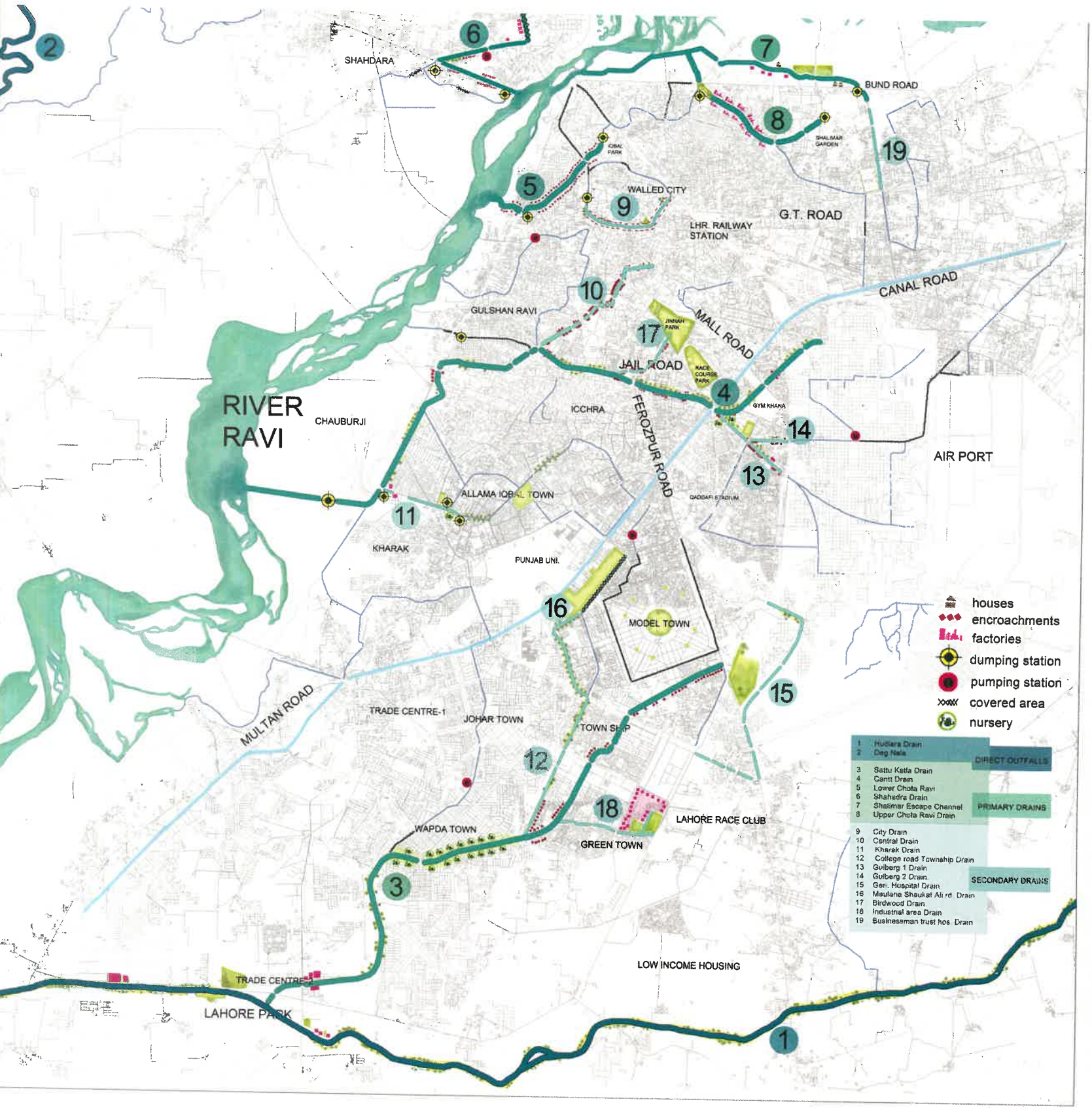
Types and Locations of Katchi Abadies in Lahore (below)

Sewerage chanels and pumping stations in Lahore (opposite page)



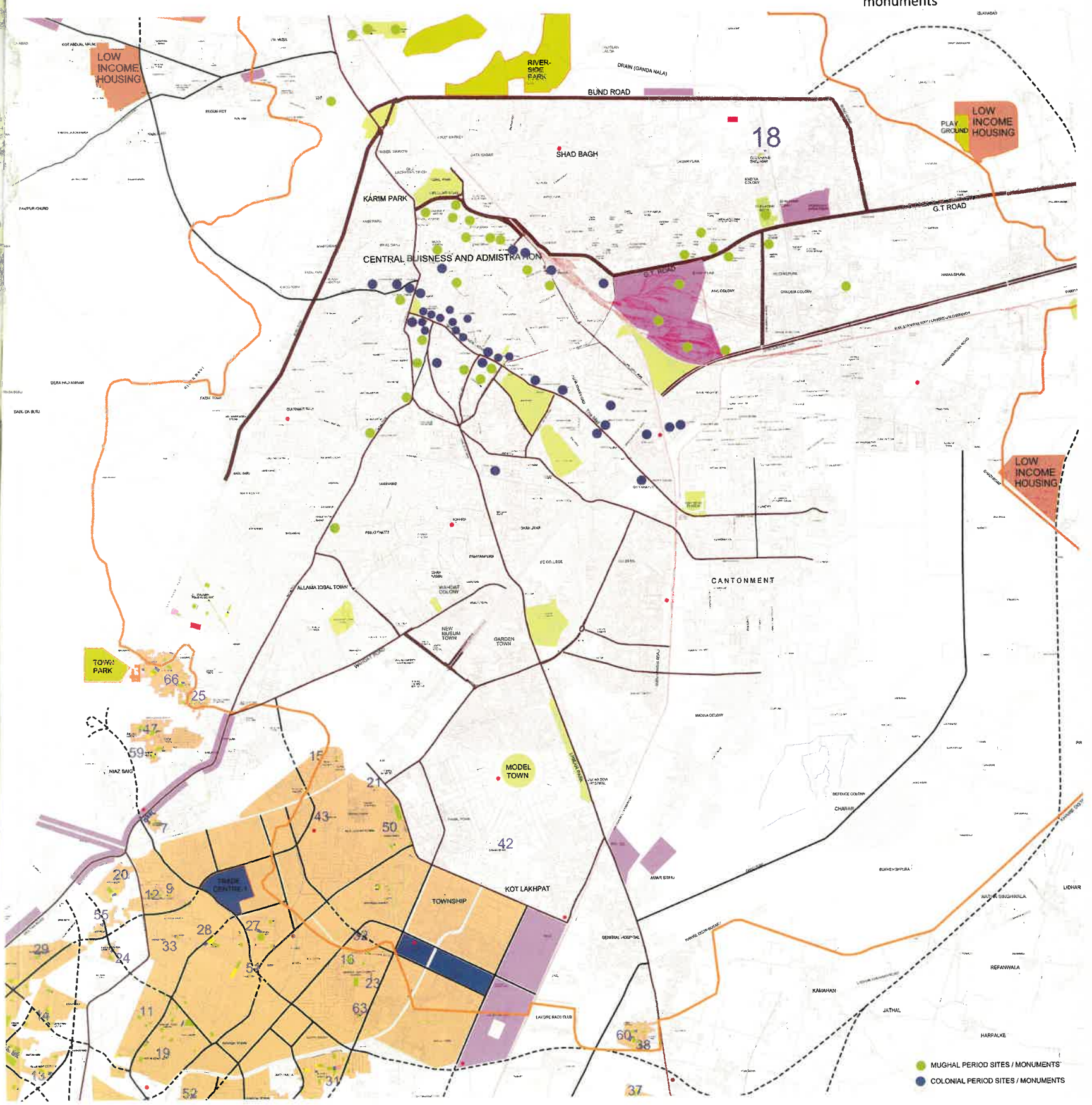
Recycling and treatment of wastewater is a very important issue which should be seriously considered by the authorities. The upcoming new schemes should incorporate separate lines - one for washing, and gardening and the second for supplying potable water. This way treated water could be well utilized for non-drinking domestic as well as commercial purposes such as irrigation, dust control, fire suppression etc. This would also help in recharging of the aquifer. Non-residential buildings which have greater water discharge should incorporate wastewater recycling systems. The capacity of these recycling plants should be equal to or more than the water inflow requirements so that it may be possible to treat a major part of the discharge.

Lahore needs an integrated approach on all fronts for sustainable urban development from urban revitalization to provision of green spaces and all kinds of public infrastructure facilities mentioned above. In all plans, the welfare of the people should be kept as the main priority and facilities should be provided for the enjoyment of life in all respects. The built environment must address psychological, aesthetic, environmental, physical and social aspects of the masses.



KARIM PARK
A
B
C
D
E
F
G
MALL ROAD
BABU SABU
FEROZPUR ROAD
JINNAH PARK
RACE COURSE PARK
GOL CHAKKAR
SHADMAN
I
J
H
PUNJAB UNIVERSITY NEW CAMPUS
Model town
JOHAR TOWN
EXPO CENTRE
K
WAPDA TOWN

Major Mughal and Colonial period sites & monuments



Ashnan	bathing
baradari	garden pavilion having twelve openings.
Barani	rain-fed area
Bazaar	traditional retail street
Boali	step well
bund galli	dead-end street
Bukarchas	a window forming a bay or recess in a room, and projecting outward from the wall, mostly in a rectangular form.
Burj	tower
rauza	tomb garden
chah	well
chajja	eave (overhang used as shading device)
chak	planned village
chobara	Attic
chowk square,	open space at the culmination of two or more street
darbar	shrine, mazar
dar ul khilafa	seat of government
Dharamshala	Hindu religious shrine
devi	a goddess
fakir	sufi saint
fauj-i-khas	special army
frangi	European
galli a	narrow or tertiary street
ghusulkhana	bedroom
gurdwara	Sikh place of worship
Guzars	sectors or quarters of a city
Hammam	steam bath
haveli dwelling,	retreat, particularly associated with important personality
jali literally	'net', perforated screen, lattice
Jamadar	Jamadar was a rank used in the British Indian Army
jharoka	window, opening protruding into the street
kalib kari	stucco work with pattern
kashi kari	a craft of decorating building with enameled mosaic tiles
Katcha	construction cried out with mud
katchi abadi	unauthorized squatter settlement
Katchi Sarai	caravanserai made of mud.
katra	a group of houses arranged around a closed-in cul-de-sac .
khalsa	Sikh community
khanqah	monastery, retreat, hospice
khasra It	is a property number assigned to a specific piece of land. Khasra number may get divided due to sale, gift during the mutation and given a new number with denominator.
khat kashi	a technique used to draw line work or false brickwork over the lime plaster.
khutba	sermon

khwabgah	bedroom
kos minar	distance marker
kucha Kucha	is a principal street in a traditional settlement. It may also be an area around the principal street.
langar khana	A langar khana is a place in sufi dargah where free food called langar is distributed to all
Mahal	mallest territorial unit of the Mughal period.
mahant	a Hindu religious leader who is head of a temple or monastery
maidan	a large open space in a settlements
mandi	wholesale market
mandir	Hindu religious structure
masawi	acadastral map showing the exact dimension of properties street located in a given settlement
Mimars	architect, builder
mohalla	neighborhood
muqarnas	honey combed structure , stalactite design
Parganna	territorial unit of the Mughal period. The Province(suba) was subdivided into Pargannas.
pujari	a Hindu priest
Qila	fort
Sahukar	money lender
Sarai	caravanserai, inn, halting place, traditional hostelry
sarkar	a defined geographical administrative area having defined boundaries.
Shawala	Sikh temple
shikara	The spire of a Hindu temple.
Smadhi	It is the Hindi name for temple commemorating the dead (similar to a mausoleum), which may or may not contain the body of deceased. It most often contain ashes of a deceased
Suba	province
Tavelas	stable
vehra	private open space in a house or common space between two or more houses belonging to same family
ziarat	shrine

Abbas,Dr. Muzaffar, *Journey to Excellence (1887-2005): A brief history of the first teachers training institution in South Asia*, University of Education, Lower Mall Lahore,2005

Abul Fazl, *Ain-e-Akbari*, trans. H. Balochmann, Low Priced Publications, Delhi, rpt. 1989

Ahmad, Molvi Nazir, *Lahore Guide*, Maktaba Jadeed Press, Lahore, 1908

Aijazuddin, F.S, Lahore: *Illustrated views of the Nineteenth Century*, Mapin Publications, 1991

Aijazuddin, F.S, Lahore Recollected: An Album, Sang-e-Meel Publications, Lahore, 2003

Akbar, M, *Punjab under the Mughal Raj*, Vanguard Lahore, 1985 rpt

Allami, Abul Fazl, *Ain-e- Akbar*,. Vol. 1. Trans. Col. J.S. Jarrett, Vol. 1, Asiatic Society of Bengal, Calcutta, 1891

Anonymous, *Annual Progress Report of Public Works in Punjab, for the year 1863-64*, Government Press Lahore, 1964.

Anonymous, *Report of the Lahore and Amritsar Improvement Trust*, Superintendent Government Printing Punjab. 1927

Anonymous, *Annual Progress Report of Public Works in the year 1866-67*. Published by Authority, Public Works Press, Lahore, n.d.

Anonymous, *Annual Progress Report of Public Works in the year 1864-65*. Published by Authority, Public Works Press, Lahore, n.d

Asher, Catherine, *Architecture of Mughal India*, Part 1. Vol. 4 .Cambridge University Press, Cambridge, 1991

Beach, Milo Cleaveland, *The Imperial Image: Painting for the Mughal Court*. Washington D.C. 1981

Bernier, Francois, *Travels in the Mughal Empire 1656-1668*, revised by Archibald Constable, Archibald and Company, Westminster, 1891.

Boardman, Philip, *Patrick Geddes, Maker of the Future*, The University of North Carolina Press, 1944

Chishti, Noor Ahmad, *Tehqiqat-e-Chishti*, Al-Faisal, Lahore, 1993

Chughtai, Muhammad. Abdullah, *Masjid Wazir Khan*, Kitab Khana Nauras, Lahore, 1975

Chughtai, Muhammad Abdullah, *Tarikh Amakin-e- Lahore*, Kitab Khana Nauras, Lahore, 1981

Coates, U. Aylmer, *Memorandum on Town Planning*, Superintendent, Government Printing Punjab, Lahore, 1944

Dar, Saif ur Rehman, Six Rare but so far unrecorded Monument of Lahore published in *Islamic Architectural Heritage of Pakistan, South Asia and Central Asia*, Department of Archaeology and Museums Government of Pakistan, Karachi, 1993

Davies, Philip, *Splendors of the Raj: British Architecture in India*, Penguin Books, London 1988

Elliot, A.C, *The Chronicles of Gujrat*, Civil and Military Gazette Press, Lahore, 1902

Foster, William. Ed, *Early Travels in India 1583-1619*. Oxford University Press, London, 1921

Geddes, Patrick, *Town Planning in Lahore: A Report to the Municipal Council*, Planning Commission, Government of Pakistan, Karachi, 1966

Gole, Susan, *Maps of Mughal India*, Manohar Publications, New Delhi, 1988.

Goulding, H. R, *Old Lahore, Reminiscences of a Resident*. Civil and Military Gazette Press, Lahore, 1924.

Government of India, Department of Administrative Reforms and Grievances, Second Adminis-

trative Reforms Commission, *Fifteenth Report, State* and District Administration, New Delhi, 2009

Government of the Punjab, Public Works Department. *Administration Report of the Buildings and Roads Branch for the Year 1913-1914*, Caxton Printing Works, Lahore, 1914.

Government of the Punjab. Public Works Department, Building and Road Branch. *Administration Report incorporating the report of the Communication Board for the year 1938-39*. Superintendent Government Printing. Lahore, 1940

Government of the Punjab, Ministry of Agriculture Public Works Department. Building and Road Branch, *Administration Report incorporating the Report of the Communication Board for the year 1934-35*, Lahore, Superintendent Government Printing Punjab, 1936

Government of the Punjab, Ministry of Agriculture Public Works Department. Building and Road Branch, *Administration Report incorporating the Report of the Communication Board for the year 1932-33*, Lahore, Superintendent Government Printing Punjab, 1934

Government of the Punjab, Ministry of Agriculture Public Works Department. Building and Road Branch, *Administration Report for the year 1923-24*, Lahore, Superintendent Government Printing Punjab, 1936

Government of the Punjab, Public Works Department, *Administration Report of the Building and Road Branch for the year 1923-24*, Lahore, Superintendent Government Printing Punjab, 1925

Government of the Punjab, Public Works Department, *Administration Report of the Building and Road Branch for the year 1922-23*, Lahore, Superintendent Government Printing Punjab, 1924

Government of the Punjab, Public Works Department, *Administration Report of the Building and Road Branch for the year 1920-21*, Lahore, Superintendent Government Printing Punjab, 1922

Government of the Punjab, Public Works Department, *Administration Report of the Buildings and Roads Branch for the Year 1913-1914*, Caxton Printing Works Lahore, 1914

Grenfell, Rudduck, *Urban Biographies, Town and Villages of Pakistan*, Physical planning and Housing Section, Planning Commission, Government of Pakistan, Karachi, 1965

Housing and Physical Planning Department, *Master Plan for Greater Lahore*, Lahore, 1966.

Khan, Inayat, *Shah Jahan Nama* trans. and edt. W. Begley and Z.A. Desai, Oxford University Press, Delhi , 1990

Khan, Syed Ghulan Hussain, *Ser-e- mutakherin* trans. Gokal Parashad, Nol Kishore Press, Lahore, 1871

Kipling, J.L, Indian Architecture of Today in *Journal of Indian Art*, Vol. 1. No 3, 1884

Koch, Ebba, *Mughal Architecture: An Outline of Its History and Development (1526-1858)*. Prestel, Munich 1991

Koch, Ebba, *Mughal Art and Imperial Ideology*, Oxford University Press, New Delhi, 2001

Lahore Development Authority, *Integrated Master Plan for Lahore-2021*, 3 Vol, National Engineering Services Pakistan (Pvt.) Ltd, Lahore, 2004

Lahore Development Authority, The World Bank and International Development Association. *Lahore Urban Development and Traffic Study*, Lahore Development Authority, 1980

Lahore Improvement Trust, *Annual Administration Report for the Year 1946-47*, Lahore Improvement Trust, Lahore, 1947

Lahore Improvement Trust, *Annual Administration Report for the Year 1944-45*, Civil and Military Gazette Press, Lahore, 1945

Lahore Improvement Trust, *Annual Administration Report for the Year 1941-42*, Civil and Military Gazette Press, Lahore, 1942

Lahore Improvement Trust, *Annual Administration Report for the Year 1944-45*, Civil and Military Gazette Press, Lahore, 1941

Lahore Development Authority, *The Walled City of Lahore*. Pakistan Environmental Planning and Architectural Consultants, Lahore, 1992

Lahori, Mufti Ghulam Sarwar, *Tarikh Makhzan-e- Punjab*. Dost Associates, Lahore rpt. 2002

Latif, Syed Muhammad, *Lahore: History Architectural Remains and Antiquities*, Lahore, new Imperial Press, 1892

Law Department, Government of Punjab. *The Lahore Ring Road Authority Act XVII of 2011*. Punjab Gazette (extraordinary July 6, 2011)

Lee, Harold, *Brothers in the Raj*. John and Henry Lawrence, Oxford University Press, Karachi, 2002

Marcioness of Dufferin & Eva, *Our Viceregal Life in India: Selection from my Journal, 1884-1888*. John Murray, London, 1890,

Mathias, N and Todorov, N. *The Ninteenth Century, History of Humanity*, Vol. VI, UNESCO, Paris 2005

Meller, Hellen, *Patrick Geddes, Social Evolutionist and City Planner*, Routledge, London, 1990.

Mohan Lal, *Travells in the Punjab, Afghanistan and Turkistan to Bulkh, Bukhara and Heart and visit to Great Britain and Germany*. Wm. H. Allen & Co. London, 1840

Mumtaz, Kamil Khan, Reading Masjid Wazir Khan, *Studies in Tradition*. Karachi.

Novak, Frank G, Jr., *Lewis Mumford and Patrick Geddes: The Correspondence*, Routledge, London, 1995

Qadeer M.A, Lahore: Urban Development in the Third World, Vanguard Books Ltd, Lahore, 1983

Rehman, Abdul. Changing Concepts of Garden Design in Lahore: From Mughal to Contemporary Times, *Garden History*, Vol. 37 No 2. 2009

Rehman, Abdul. *Historic Towns of Punjab: Ancient and Medieval Period*, Ferozsons, Lahore, 1997a

Rehman, Abdul, Garden types of Mughal Lahore according to early seventeenth century written and visual sources, *Muqarnas Special Supplement VII*. E.J Brill, Leiden, 1997b

Rehman, Abdul, Wescoat James. L, *Pivot of the Punjab: The Historical Geography of Medieval Gujrat*, Dost Associates, Lahore, 1993

Rehman, Abdul, *The Lahore Fort in Mughal Garden, Documentation*. University of Engineering & Technology, Lahore, 1993

Rehman, Abdul, Agricultural Economy and Development of Mandi Towns. *Research Journal*, Vol. 5 No. 2, University of Engineering & Technology, Lahore, December, 1991

Rehman, Nida, *From Artifact to Site. Understanding Canal in the City of Garden*, Massachusetts Institute of Technology, Cambridge, 2009

Sanderson, Gordon, *Report on Modern Indian Architecture: Types of Modern Indian buildings at Delhi, Agra, Allahabad, Lucknow, Ajmer, Bhopal, Bikanir, Gwalior, Jaipur, Jodhpur and Udaipur, with Notes on the Craftsmen Employed on their Design and Execution with an introductory note by Mr. J. Begg*, Consulting Architect to the Government of India, Superintendent, Government Printing, Allahabad, 1913

Saran, P, *The Provincial Government of the Mughals, 1526-1658*, Sunita Publications, Delhi, 1988

Schimmel, Annemarie, Poetic Vision of Lahore in Qureshi, Samina. *Lahore: The City Within*, Concept Media, Singapore, 1983

Sharma, Sunil, *Persian Poetry at the Indian Frontier: Masud Sad Salman of Lahore*, Permanent Black, Delhi, 2000

Sirhindi, Yahya bin Ahmad, *The Tarikh-I-Mubarakshahi*. trans. H. Beveridge, Low Priced Publications, Delhi, rpt. 1990

Stacey, Vivienne, *Thomas Valpy French, First Bishop of Lahore*, Pengraphics (Pvt.), Islamabad 1993

Thronton. T. H, *A Brief Account of the History and Antiquities of Lahore*. Part 1, Government Civil Secretariat Press, Lahore, 1973

Vandal P. and Vandal S, *The Raj, Lahore and Bhai Ram Singh*, NCA Publications, Lahore, 2006

Volker M. Welter, *Biopolis: Patrick Geddes and City of Life*. Massachusetts Institute of Technology Press, Cambridge, 2002

Walker. G.C, *Gazetteer of the Lahore District 1893-94*. Superintendent Government Printing Press, Lahore, 1894

Week, Edwin Lord, *From Black Sea through Persia and India*. Harper and Brothers, New York. 1896

Wescoat, James L, Gardens of Innovation and Exile, the Precarious Context of Mughal Garden Design during the Reign of Humayun 1530-1556, *Journal of Garden History*, Vol. 10, 1990

PERSONS

Mian Abdul Aziz. 26, 65-67

Nayyar Ali Dada. 184-185

Dr. Honigberger, 46-47

Talib Hussain. 207

Farrukh Ahmad Khan. 117

Muhammad Arif Khan. 132-35

Josef Mayer. 215-19

Kamil Khan Mumtaz. 223

Faisal Sajjad. 73, 75

Sajida Vandal. 71, 89

James L Wescoat Jr. 69

Affira Atta, Anum Tariq, Fatima Rauf. 234-235

Huma Ijaz, Nayab Khalid, Wajiha Tariq, Junaid Hussain. 238

Ambreen Hamid, Hamza Masood, Aisha Naureen, Azwin Haq. 239

Saba Aziz, Nur ul Huda, Arshia Mukhtar, Ramsha Rehman. 240

INSTITUTIONS

British Museum. 33, 35, 36-37, 187

Housing & Physical Planning Department. 213

Lahore Municipal Corporation. 27, 30, 83, 192-193

Lahore Rapid Mass Transit System Authority. 231

Lahore Ring Road Project. 201, 229

Maharaja Ranjit Singh Museum, Amritsar. 44-45, 50-51

National Engineering Services Pakistan 225, 230

National Library Canberra. 55, 61

Lahore Municipal Corporation. 27, 30, 83, 192-193,

Pakistan Environmental Planning and Architectural Consultants. 21, 220-21

Punjab Archives. 38-39, 48-49, 54, 57, 63, 85, 113, 115, 127-30, 203

Sustainable Development the Walled City Project. 90-107,109

The Urban Unit, Government of the Punjab. 141, 144-45, 147, 149, 152-3, 156-57, 159, 162-63, 165, 167, 169, 171, 173, 177, 179, 181.

Victoria and Albert Museum, London. 52-53

A

Abdus Samad 20
Afghanistan 20
Agra 9, 15, 20, 21, 24, 25, 118, 120
Akbar 20, 21, 22, 23, 27, 120, 174
Albert Victor Scheme 136
Alferd Woolner 186
Ali Mardan Khan 23, 120, 160
Allama Iqbal Town 31, 32
Anarkali 13, 17, 26, 56, 58, 59, 64, 66, 70, 72, 81, 86, 110, 112, 128, 142, 143, 146, 151, 168, 170, 180, 186, 190, 191, 192
Asaf Khan 23

B

Badhana 15, 60
Badshahi Mosque 25, 108
Baghbanpura 15, 112, 120, 136, 186
Bahmman 148
Bari Doab Canal 26, 27, 112, 136, 154, 164
Basil M Sullivan 29, 89, 150
Bazaar 17, 21, 23, 42, 56, 84, 116, 118, 146, 150, 166, 174, 203
Bhadar Kali 12
Bhai Ram Singh 28, 142, 143, 194
Bherastan 11
Birdwood Barracks 154
Breslauer 136
bukarchas 116

C

Cantonment 56, 59, 60, 64, 66, 67, 84, 111, 112, 186
Chajja 116, 118
Changar Mohalla 124, 168
Charing Cross 86, 136, 190, 191, 192, 194, 232
Charles Napier 66
Chauburji 13, 27, 146
Chota Ravi 50, 142, 148, 158
chowk 23, 116, 174, 226
Chunian 48
Circular Garden 68, 69, 86, 108, 166, 174
City of Lahore Corporation Act 202
Conservation Plan 218, 219
Cooperatives Societies Act II 111

D

Delhi 9, 15, 16, 17, 20, 21, 23, 25, 96, 111, 116, 118, 128, 150, 160, 174
Dhobi Mandi 146, 170
Donald Town 27, 29, 110, 112, 136
Dubbeleere of Antwerp 76
Dulip Singh 26

E

Ebenezer Howard 122
Eminabad 13, 14

F

Fatehgarh 15, 112
Ferozepur Road 10, 11, 13, 17, 112, 125, 131, 154, 191
Francois Allard 56
Francois Bernier 16

G

gali 116
Ganj 15, 24, 120, 142
Garhi Shahu 15, 140, 150, 151, 160, 164
G. E. Francis 136
General Allard 60
General Ventura 26
George Gilbert Scott 74
Ghaznavid 19, 20
Gore Shah 158
Government Officers Residence (G.O.R) 154
Grand Trunk Road 9, 13, 14, 15, 20, 26, 110, 111, 125, 136, 140, 150, 151, 160, 174
Green space 150, 237
Gulberg 27, 31, 32, 125, 208
Guru Nanak 14
Gwalmandi 29, 125, 150, 151

H

Hanjarwal 12
Harike Road 15
Henry Lawrence 26, 46
Humayun 20, 176

I

Ichhra 10, 11, 26, 31, 112, 131, 136, 154

J

Jahangir 11, 13, 14, 15, 16, 21, 22, 23, 24, 112, 154, 158
Jain Mandir 13, 17, 86
Jean-Baptiste-Joseph Gentil 34
Jean-Baptiste Ventura 56
jharokas 13, 116, 174
John Beggs 29
John Lockwood Kipling 28
John Oldrid Scott 74
J. W. Brossington 75

K

Kabul 9, 13, 14, 20, 184, 193
Kala Burj 22
Kandahar 36
Kashmir 9, 13, 14, 20, 22, 23, 25, 174
Kasur 48
katra 116
Khoi Miran 64, 84
Khokhar 148
Khyber Pass 20
King Edward 30, 86, 111, 136, 143, 172, 193, 194
King Edward Memorial Scheme 86, 111, 143
Kot Khoja Said 120, 158
Kot Lakhpat 31, 180
Krishan Nagar 29, 30, 130, 142, 184
kucha 42, 116

L

Lahore 9, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 36, 38, 39, 40, 41, 42, 44, 46, 48, 50, 52, 54, 55, 56, 58, 59, 60, 62, 63, 64, 66, 67,

68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 108, 110, 111, 112, 114, 116, 118, 119, 120, 122, 123, 125, 128, 130, 131, 136, 137, 140, 142, 143, 146, 148, 150, 151, 154, 155, 158, 160, 161, 164, 166, 168, 170, 172, 174, 176, 178, 180, 181, 184, 186, 187, 190, 191, 192, 193, 194, 196, 199, 200, 233, 202, 203, 206, 207, 208, 210, 212, 217, 218, 219, 220, 222, 226, 227, 228, 89, 231, 232, 233, 234, 236, 237, 239, 44, 46, 128
Lahore Darbar 72
Lahore Electric Supply Company 86
Lahore Rapid Mass Transit System 228
Lahore Ring Road 222, 226, 227
Lahore Sewerage 128
Lahore Suba 33, 34
Land Utilization 200
Lawrence Gardens 27, 136, 200
Lewis Mumford 122
Loco Workshops 136, 160, 164
Lord Curzon 84
Lord Hardinge 60
Lyallpur 28

M

Maharaja Duleep Singh 60
Maharaja Ranjit Singh 16, 39, 40, 42, 44, 46, 50, 166, 178
Mahmud of Ghazna 20
maidan 116
Master Plan 210, 220, 222, 228
Mayo Garden 136, 151, 164
Mayo Hospital 17, 27, 81, 86, 110, 111, 143
Mclagan Engineering College 160
Mela Ram 124, 140, 142, 154, 155
Mian Mir 23, 24, 26, 31, 110, 111, 120, 154, 190
Mir Syed Ali 20
Mirza Kamran 15, 16, 22, 176
Model Town 29, 31, 64, 111, 136, 180, 181, 200, 202, 208, 210, 226, 233
mohalla 23, 116, 146, 150, 151, 174, 220
Mohalla Dara Shikoh 15, 23, 124, 150, 176
Mohalla Langar Khan 13, 21
Mohan Lal 15, 16
Mozang 11, 12, 13, 17, 29, 110, 120, 124, 125, 131, 146, 151, 186
Mughalpura 15, 29, 111, 120, 160, 164
Mulla Ala ul Mulk Tuni 23
Mullah Shah Badakhshi 24
Murad Bakhsh 64

N

Nadir Shah 25
New Garden Town 31
New Muslim Town 31
Nila Gumbad 17, 30, 111, 136, 143, 150
Nullah Dek 14, 112
Nur Jahan 19, 23, 24

P

Paniwala Talab 20
Patrick Geddes 29, 118, 122, 168, 192
Portland Cement 184
Prince Kamran 20
Punjab University 27, 31, 81, 136, 142, 143, 168, 194, 208

Q

Qila Gujar Singh 26, 112, 124, 150, 151, 200
Qutbud Din Aibak 17, 20

R

Raj Garh 146
Rapid Bus Transit System project 228
Recycling 238
Rehman Pura 31
River Ravi 12, 14, 16, 25, 37, 39, 46, 52, 56, 58, 60, 64, 69, 76, 84, 86, 112, 114, 130, 140, 208, 224, 238

S

Sacred Heart Cathedral 76
Samanabad 31, 125
Sanda 130, 146
Sant Nagar 29, 142, 184
Sarai Sultan 86, 150
Saruwala Maqbara 160
Shadbagh 31
Shadi Lal building 111
Shahdara 13, 14, 16, 23, 24, 112, 140, 148, 180
Shah Jahan 23, 24, 25, 110, 164, 174, 176
Shalamar Gardens 15, 160
Sharakpur 48, 114
Shehryar 23
Sheikhupura 13, 14, 22, 140, 191
Sher Shah Suri 13
Sikandar Suri 20
Singhpura 158
Sir Ganga Ram 16, 142, 180, 186, 190, 194
Structure Plan 220
Syed Mubarak Shah 20

T

The Mall 27, 30, 64, 70, 72, 84, 86, 110, 136, 142, 143, 154, 170, 172, 180, 184, 190, 191, 192, 193
Thokar Niaz Beg 12
Thomas Huxley 122
Thomas Valpy French 74

U

U. Aylmer Coates 200

V

vehra 116, 118
Veterinary College 29, 86, 111, 136, 142

W

Wahdat Colony 31
Wazir Khan 23, 24, 29, 30, 116, 119, 174

Al-Meezan
Publishers and Book Sellers
Phone: +92 42 3712 2981, Fax: +92 42 3721 2762
E-mail: info@almezaanpublishers.com
www.almezaanpublishers.com

CAD LIBRARY F.U. LHR
911.
A
2
10

Tracing Historical Geography through Maps
About Pakistan