HISTORIC RELIGIOUS IDENTITY, RAY URBAN DIGNITY
Searching Planning perspective at the neglected historic religious district to revive the local quality as a promoter of urban cohesion in different scales

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Historic Religious Identity, Ray Urban Dignity

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SECTION 01.
INTRODUCTION
Background information

TEHRAN as the main Iran’s Centrality

%20 of the country’s population
%48 of the country’s high ranking officials
%44 of the country’s financial services
%40 of the country’s food industry
%40 of the country’s consumption markt
%36 of the country’s big factories

%34 of the country’s clerical workers, etc.
%31 of the country’s red meat supply
%30 of the country’s employment in manufacturing industry
%29 of the country’s wholesale, retail, restaurants and hotels
%24 of the country’s water, electricity, and gas consumption

The maps show the location of Iran, Tehran and Ray.
Background information

RAY at a glance

Abd Al Azim Al Hassani Holy Shrine 8-10million visitors/year

Industrial Sector
more than 1000 industrial units
430 ha industrial and storage areas

Agricultural Products
%70 Tehran’s vegetable supply
%50 Tehran fruit supply
6000 ha agricultural lands
The importance of Ray

Silk Road

It had given Ray a trading importance as a main trading center between East and West in Sasanian Dynasty (224 AD - 651 AD)
The scale of the city

The maps compare the scale of Randstad with Tehran and Delft with Ray.
Vision of Tehran Master Plan in 2025

The image shows Tehran Master plan that the historic religious centre has been defined in Ray. Source: Tehran municipality.
Unequal development in Tehran
Social Segregation

12 millions population in Tehran province
04 millions population in the Suburbs
Tehran population

430,000 Residents in Ray
70,000 Migrants in Ray

Migrants in Urban Decay Tissue

Literacy Ratio

Unemployment
Unequal development in Tehran
Spatial Segregation

Land Price

Life Quality

Valuable Historic Tissue
Concentration of the high scale functions
Spatial Segregation

The map shows the concentration of the high scale functions.
The concentration of the commercial activities, services and green areas are mostly in the centre and north zones and industrial functions and agricultural lands are mostly in the southern part.

The map shows distribution of the urban activities with high quality functions in the North, activities in the centre and industries in the South.
RESEARCH QUESTIONS

-How Ray can be improved to have better social interaction within the district? What kind of social and spatial interventions are needed to provide this opportunity?

-How Ray can be improved to have better synergy with the rest of the city in future? What kind of physical and spatial interventions are needed to provide this opportunity?

and sub questions are;

-Why Ray district with 6000 years antiquity, highest tourist attractions in Tehran metropolitan, the third important religious zone in Iran, has been segregated with poor condition in local level?

-What spatial regeneration interventions can increase livability in this area?

-How Ray can use of its inherent potentials to reinforce investment opportunities? What are Ray inherent potentials and which one has a powerful role?
RAY POTENTIALS

- Abd Al Azim Al Hassani Holy Shrine: 8-10 million visitors/year
- Industrial Sector: More than 1000 industrial units, 430 ha industrial and storage areas
- Agricultural Products: 70% Tehran’s vegetable supply, 50% Tehran fruit supply, 6000 ha agricultural lands

AIM OF THE PROJECT

[Diagram showing connections between religious center, pilgrims, civil center inhabitant, public facilities, historic centers]
BEFORE ISLAM
FROM 550 BC- 651 AD

AFTER ISLAM
FROM 639 AD

AFTER MODERNISATION
Beginning of the Polarisation / the Social-spatial Segregation in Tehran
FROM 1920 AD
RAY- BEFORE ISLAM
550 BC- 651

-Rampart
-Castle
-Temple
RAY- AFTER ISLAM

639 AD

-Mosque
-Bazaar
-Gate
-Residential Neighbourhood
Islamic urban components were added. Ray was destruction by Ghaznavi’s king.
The shrine was costructed. Ray became the Capital. Mongol attacked.
The shrine surrounding was expanded. As a result, the shrine role was highlighted and it was visited by more pilgrims.
The map shows Tehran in 1890. Source: based on Mashayekhi, 2009, Edited by Author.
MODERNISATION
FROM 1920 AD

Beginning of the Polarisation / the Social-spatial Segregation in Tehran
- Car
- Infrastructure network
- Highrise buildings existed

The photo illustrates Tehran’s modern transportation network in 1930s which changed the traffic pattern from pedestrian to vehicle. The traditional city was superimposed by the squares, wide boulevard and the new public spaces (Source: http://www.skyscrapercity.com).
Tehran Urban growth process
1881-1996

“From a walled city of 19 square kilometres with an estimated 230,000 inhabitants in 1900, marked by the salience of three national institutions—bazaar, mosque and royal court—Tehran had by 2010 evolved into a metropolis housing almost a sixth of the country’s population” (Bayat, 2010, p.101)
RAY - After Modernisation
Ray urban growth from 1921 to 2013

Ray was an important city in Iran but unfortunately, by Tehran growing after the modernisation process, the glory of Ray was hidden. In fact, Ray today has been absorbed into the greater Tehran metropolitan area.

The maps show Ray urban growth from 1921 to 2013, Illustrated by author.
Birth of the metropolis
Pahlavi I Dynasty 1920-1940
This map shows Tehran in 1953. Source: based on Mashayekhi, 2009, Edited by Author.

The new Bank on the one side of the Topkhaneh square in the early 20th century.

This photo shows the influence of Western architecture on the buildings of that time.
The first masterplan for the city
Pahlavi II Dynasty 1964-1973

This map shows Tehran in 1373. Source: based on Mashayekhi, 2009, Edited by Author.
Ray urban growth
1900 -1956

The map shows Ray in 1900-1920, illustrated by author.

The map shows Ray in 1921-1956, illustrated by author.

This photo shows Mozaffary Street as the main shrine access was widened.
Ray urban growth
1956-1976

The map shows Ray in 1956-1964, illustrated by author.

The map shows Ray urban fabric in 1956, illustrated by author.

This photo shows the east view of shrine which surrounded by gardens.
1973-1996 Metropolization, Islamic Revolution, Iraq - Iran war
Figure 2.53: This map shows Tehran 1996. Source: based on Mashayekhi, 2009, Edited by Author.
Figure 2.54: This map shows Tehran in 2007. Source: based on Mashayekhi, 2009, Edited by Author.
Ray urban growth
1976 - 2012


This map shows Ray urban fabric 1996-2012, illustrated by author.
Ray industrialization growth process
1955-2013

- Small industries with new residential complexes emerged mostly in the North of Ray;
- Rural migrants settled in Ray.

- The light industry grew along the main road;
- The industrial neighbourhoods were increased in the North.

- The massive war’s migrants, Afghan refugees and workers of the industry sector settled in Ray;
- Industries and their residential were added in the West along the train line;
- The role of the shrine became highlighted after the revolution;
- The social fabric is changing

- Municipality planned for south development by highlighting the Ray historic religious character;
- The mass complex buildings were constructed;
- The new constructed highways resulted fragmentation.

The maps show the Ray industrialization growth process from 1955 to 2013.
Historic Analysis Evaluation Design proposal Design Strategies Urban Analysis Introduction
SECTION 3. URBAN ANALYSIS
Distribution of urban activities
Spatial Segregation
functions
Spatial Segregation functions

Due to the fact that the public spaces quality and services are not well designed, they should be taken into consideration that help the district to be more livable and attractive.

The map shows the different types of public spaces in Ray, illustrated by author.
Public spaces
The shrine complex
Public spaces
The metro stations
SECTION 04.
DESIGN STRATEGIES
The research in the chapters history and urban analysis showed how Ray lost its importance and character by transformation and inappropriate interventions. These factors created a socially and spatially segregated district in metropolitan scale and a fragmented district in local scale.

In this section, design strategies will be proposed which will be a response to the main research questions in order to find normative solutions. These questions are as they follow:

**How Ray can be improved to have better synergy with the rest of the city in future? What kind of physical and spatial interventions are needed to provide this opportunity?**

**How Ray can be improved to have better social interaction within the district? What kind of social and spatial interventions are needed to provide this opportunity?**
The location which is in the southern district

North highway which is separated Ray from Tehran

the huge industries in both side of the highway which act as a barrier

Due to:
- Industries,
- Agricultural lands,
- Land price,
- And location

It is known as an arrival district for migrants.
Historic Analysis Evaluation
Design proposal
Design Strategies
Urban Analysis
Introduction

- highway, road and metro line
- wastelands, useless spaces and abandons industries
- lack of well designed and facilitated general public spaces

Reasons of fragmentation

- proposing a new Tram network
- improving the pedestrian network
- converting the useless areas to public spaces and highlighting some of them

Different scales strategies Local
Local scale strategy
Spatial Development of Transit Nodes

Basically, a new transit network will provide spatial development opportunities for its area. In fact, a new type of public transportation combined with an urban renewal, can help the area becomes more vital and contributes on its economic activities. As a matter of fact, the commercial, service functions and administrative function will be concentrated in the vicinity of the transit nodes. As a result, the land value will gradually increase. Generally speaking these new types of developments create support for the public transportation system that cover part of the public transit development costs (Hemmati, 2012).

Hence, the new investments in the Ray public transportation system should follow a more integral investment policy of the district. Overall, by following the policy, when these two quantities are developed in an integrated way, high costs and poor results can be avoided (Priemus et al., 1999).

In order to propose the spatial development around the transit nodes, Transit Oriented Development (TOD) principle will be explain.
General Rules For TOD

**Catchment Area**
TOD locations within comfortable walking distance of transit nodes.

**Compact Development**
Medium to high-density housing and employment.

**Muli-Modal Transit Nodes**
Accessibility to various modes of transport in the transit nodes.

**Mix of Uses**
Diverse and complementary high-activity uses, such as retail, professional services, housing and employment.

**Pedestrian Oriented**
Attractive pedestrian environment, with street-facing buildings that connects the transit stop to the commercial, civic and residential areas.
### Design Guidelines Matrix for Transit Nodes Development

<table>
<thead>
<tr>
<th>Transit Node Type</th>
<th>Airport Node</th>
<th>Regional Centre</th>
<th>Town Centre</th>
<th>Neighbourhood Centre</th>
<th>Semi-Industrial Centre</th>
<th>Industrial Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Within Airports.</td>
<td>Within the downtown of the large cities.</td>
<td>Within the centre of the medium or future medium size cities.</td>
<td>Adjacent or within residential areas.</td>
<td>Adjacent to both residential and industrial areas, with the two area separated by major barrier (major road/highway; rail line).</td>
<td>Adjacent or within industrial areas or other large employment centres.</td>
</tr>
<tr>
<td>Land Use</td>
<td>Employment (Airport Agency, International Company, Commercial Activity); Supporting Retail &amp; Services;</td>
<td>Employment (Commercial Activity, Office, Institution); Mixed Use; Cultural and Entertainment Destination; Residential; Major Retail &amp; Services; -Restriction of all forms of industries and auto related uses;</td>
<td>Employment (Commercial, Office); Mixed Use; Residential; Supporting Retail &amp; Services; -Restriction of all forms of industries;</td>
<td>Residential; Supporting Retail &amp; Services; -Restriction of all forms of industries;</td>
<td>Employment (Industrial, Office); Warehouse and Storage Residential; Supporting Retail &amp; Services;</td>
<td>Employment (Industrial, Office); Warehouse and Storage</td>
</tr>
<tr>
<td>Land Use Ratio</td>
<td>100% Non-Residential</td>
<td>20% Residential &amp; 80% Non-Residential</td>
<td>50% Residential &amp; 50% Non-Residential</td>
<td>80% Residential &amp; 20% Non-Residential</td>
<td>35% Residential &amp; 65% Non-Residential</td>
<td>more than 95% Non-Residential</td>
</tr>
<tr>
<td>Density</td>
<td>High-density commercial, employment;</td>
<td>High-density mix of residential, commercial, employment, and civic/cultural uses;</td>
<td>Moderate to high-density mix of residential, commercial, employment, and civic/cultural uses;</td>
<td>Moderate to high-density, predominantly residential uses with supporting retail and employment uses;</td>
<td>Moderate density, predominantly industrial units with supporting residential areas;</td>
<td>Varies;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Height of Building</th>
<th>Transit Modes</th>
<th>Mobility Facility</th>
<th>Average Job / Housing Ratio</th>
<th>Total Job Target</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-rise and mid-rise buildings</td>
<td>Automobile Rail Transport System Express Bus</td>
<td>Park &amp; Ride Bicycle Facility</td>
<td>No Residentials</td>
<td>More than 50,000</td>
<td>Imam Khomeini International Airport Payam International Cargo</td>
</tr>
<tr>
<td>High-rise and mid-rise buildings</td>
<td>Metro Rail Transport System BRT Local Bus Express Bus</td>
<td>Bicycle Facility</td>
<td>10 Jobs: 1 Dwelling</td>
<td>20,000 – 50,000</td>
<td>Karaj City Centre</td>
</tr>
<tr>
<td>Mide-rise and low-rise buildings and few single family housing</td>
<td>Automobile Rail Transport System Local Bus Express Bus</td>
<td>Park &amp; Ride Bicycle Facility</td>
<td>5 Jobs: 1 Dwelling</td>
<td>5,000 – 15,000</td>
<td>Esalshahr Central Station Parand Central Station Pakdasht Station</td>
</tr>
<tr>
<td>Mide-rise and low-rise buildings and single family housing</td>
<td>Automobile Rail Transport System Local Bus</td>
<td>Park &amp; Ride On-Street Parking Bicycle Facility</td>
<td>1 Jobs: 3 Dwelling</td>
<td>limited</td>
<td>Esalshahr North Station Parand Stations Soltanabad Station</td>
</tr>
<tr>
<td>Mide-rise and low-rise buildings and single family housing</td>
<td>Automobile Rail Transport System Local Bus Express Bus</td>
<td>On-Street Parking Bicycle Facility</td>
<td>7 Jobs: 1 Dwelling</td>
<td>5,000 – 15,000</td>
<td>Chahardangeh Station Shamsabad Station</td>
</tr>
<tr>
<td>Varies</td>
<td>Automobile Rail Transport System Local Bus Express Bus</td>
<td>On-Street Parking</td>
<td>Varies</td>
<td>More than 30,000</td>
<td></td>
</tr>
</tbody>
</table>
Public transportations in Tehran

The map shows Tehran public transportation network, active metro lines and the proposal ones. Currently, line number 1 connects Ray to the rest of the city, and line number 6 is proposed, illustrated by author.
METROPOLITAN SCALE STRATEGY

New Centralities

By proposing new metro stations, Ray can be joined to the Tehran network.

Converting the useless areas to public spaces and highlighting some of them.

Proposing two new stations in East side in order to make a balance.

Old station with 2 new metro stations can cover the district.
1 Semi Industrial Centre

2 Neighbourhood Centre

3 Town Centre

4 Regional Centre

TOD - TRANSIT ORIENTED DEVELOPMENT NODS

- Commercial or Mixed Use
- Residential
- Industrial
Zonning plan

replacing the industries to sustainable ones in both sides of the highway

continuing Tehran’s functions, green, sport or etc., to Ray

The map shows the proposal zonning areas as a local scale strategy in order to organize future developments of the district, illustrated by author.
The image shows the first train in Tehran which called Mashin Doodi in order to make Ray more accessible for pilgrims.

The map shows the proposed Tram network that has made the district more accessible as a local scale strategy, illustrated by author.
Local scale strategy
Pedestrian sidewalk

Improving the pedestrian network

Weakness of the pedestrian network

The map shows the proposal pedestrian network as a local scale strategy. Illustrated by author.
Local scale strategy
Preserving the green belt as a green engine

Preserving the green belt

The map shows the Tehran master plan that preserving the green belt is a main prospect.

Tehran municipality's prospect

The image shows the flower industry that can be applied along the metro line.

The image shows the proposed strategy in order to preserve the green belt. Illustrated by author.
Local scale strategy
Preserving the green belt as a green engine

The images show old and new buildings adjacent to each other, have made the district chaotic.

The image shows that the shrine was built in the middle of the gardens.

The map shows the proposed strategy in order to replace useless area to public spaces. In addition, using the west line as a future development opportunities. Illustrated by author.
Future development capacities

- **Using the abandoned industries**

- **TOD nodes development**

- **Using waste lands along the train line**
SECTION 5.
DESIGN PROPOSAL
The public space plays a key role in an urban structure and city life. It as a privileged element provides an opportunity to promote local cohesion. In fact, a public space with its natural ability can create and maintain strong local centrality. In addition, a public space effects environmental quality, economic competitiveness and emphasises the sense of citizenship.
Historic Analysis Evaluation

Design proposal Design Strategies Urban Analysis

Introduction

Station

Modarres Boulevard

Shrine

Ray

Metro Station

The Holy Shrine

Metro Station Modarres Boulevard Shrine

The Holy Shrine

Design proposal
CASE STUDY

Design location size
almost the south of Ray is located in design process

<table>
<thead>
<tr>
<th>size</th>
<th>Problematic areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700 m</td>
<td></td>
</tr>
<tr>
<td>550 m</td>
<td></td>
</tr>
<tr>
<td>750 m</td>
<td></td>
</tr>
<tr>
<td>1800 m</td>
<td></td>
</tr>
</tbody>
</table>
Case study analysis
Land use

The map shows the site functions, which the residential and agricultural are the highest. Illustrated by author.
# Case study analysis

## Land character

<table>
<thead>
<tr>
<th>Private Character</th>
<th>Public Character</th>
<th>Wastelands Character</th>
</tr>
</thead>
</table>

The maps show the site functions/zones. Illustrated by author.
Case study
Buildings typology

The map shows the buildings quality. Illustrated by author.

The map shows the number of buildings stories. Illustrated by author.
Case study Design proposal
Boulevard as a guideline

The diagrams show the current condition of the boulevard and the proposal plan. Illustrated by author.

The pictures show the example of the active boulevard which is a pedestrian axis with public facilities. source: www.landezine.com
Case study Design proposal
Infrastructure

Current infrastructure

Proposed infrastructure

The map shows the current infrastructure with its weaknesses. Illustrated by author.

The map shows the proposed infrastructure. Illustrated by author.
Case study Design proposal
Pedestrian network

250,000 visitors for martyrdom of Imam Ali
250,000 visitors for New Year
12,500 visitors for Thursdays & Fridays
8,000 visitors in Normal Days
In order to create a regional centre in the Ray metro station, activate the boulevard, make the shrine more accessible, offer more visitors’ services and generally upgrade the south zone, this vision map is proposed. The vision map illustrates the proposed functions in details.
The axis proposed design

Modarres Boulevard

The images show Modarres boulevard condition (the connection between the station and the shrine) before and after the design proposal. Illustrated by author.
The station proposed design

- The residential building is converted to the public services.
- Metro station entrance.
- Metro station building.
- Temporary market in the plaza.
- Public services in the first floor and other floors are high professional administrative and business.

**NORTH view to the Station**
The station proposed design
The boulevard proposed design
The boulevard proposed design

The picture shows the boulevard atmosphere with the proposed cultural centre and market in the boulevard. Illustrated by author.

Cultural centre, Iconic building is located in the wasteland

The wide boulevard is used only by pedestrian and public transportation

Residential buildings converted to the public services just in the first

WEST view to the Shrine
The boulevard proposed design

- Residential buildings converted to the public services services
- The old parking converted to the new shopping mall
- Present shops are renovated

*NORTH East view of the Boulevard*
The shrine zone proposed design
The picture shows the south development, the tourist facilities in one and two stories, the camping park and agricultural lands. Illustrated by author.
The shrine zone proposed design

Tourists hotels and services are located in the south of the Shrine

Temporary market or exhibition is located in the entrances of the Shrine

Residential buildings converted to the public services just in the first floor

The wasteland is converted to a multi-story parking lot with balcony restaurant and nice view to the shrine and the green lands

Temporary market or exhibition is located in the entrances of the Shrine

Camping Park is located in the south of the shrine in the large green park

SOUTH view to the Shrine

EAST view to the Shrine
The axis proposed design

The map shows the connection between the metro station and the Holy Shrine. Illustrated by author.
Design strategies in different scales

The image shows the hierarchy strategies from the local scales to metropolitan scale. Preserving the green belt, activating public spaces, organizing zoning areas, improving pedestrian network, introducing tram network as local scale strategies and defining new metro stations as a metropolitan scale strategy have tried to decreased social spatial segregation problems and increase local quality and make the district more active, cohesive, livable and attractive.
This image shows the current situation of Ray, which is defined in three main cores, industrial, historic and religious that their connections are weak. Due to infrastructure, Ray is fragmented in local scale and segregated in higher scale. There are two metro stations with no relationship and the green belt has been abused.

This image shows the proposal situation. The industry and religious cores replaced with job & activity and cultural centres. The connections between three centres have been reinforced. There are a strong relationship between metro stations and the other centres. By introducing tram and pedestrian network, The fragmented Ray is more cohesive, accessible, liveable and connected to the rest of the city by introducing new metro line.
proposed design of the public spaces

The map shows the proposed development for south zone. Illustrated by author.
Thank You!