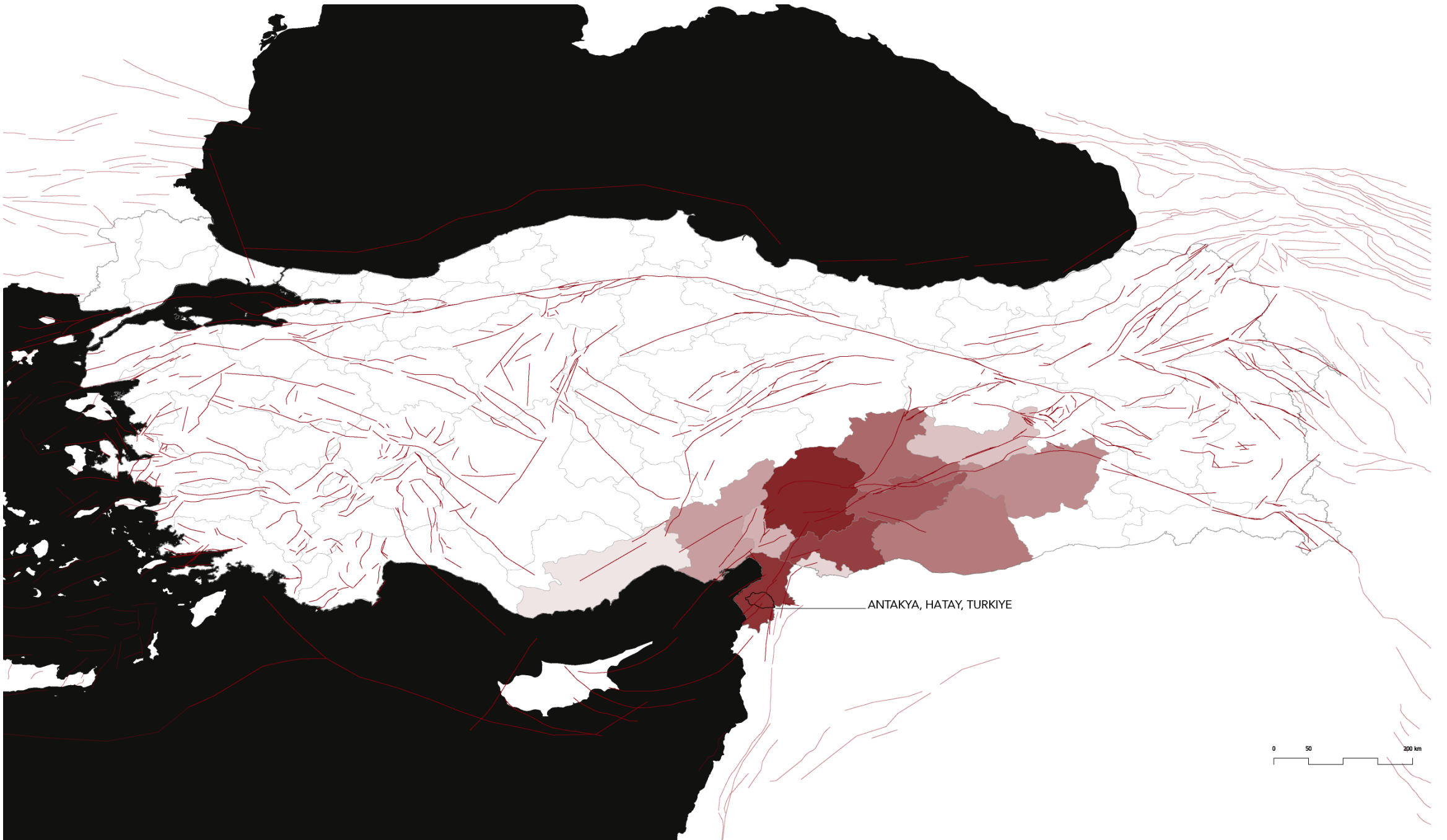


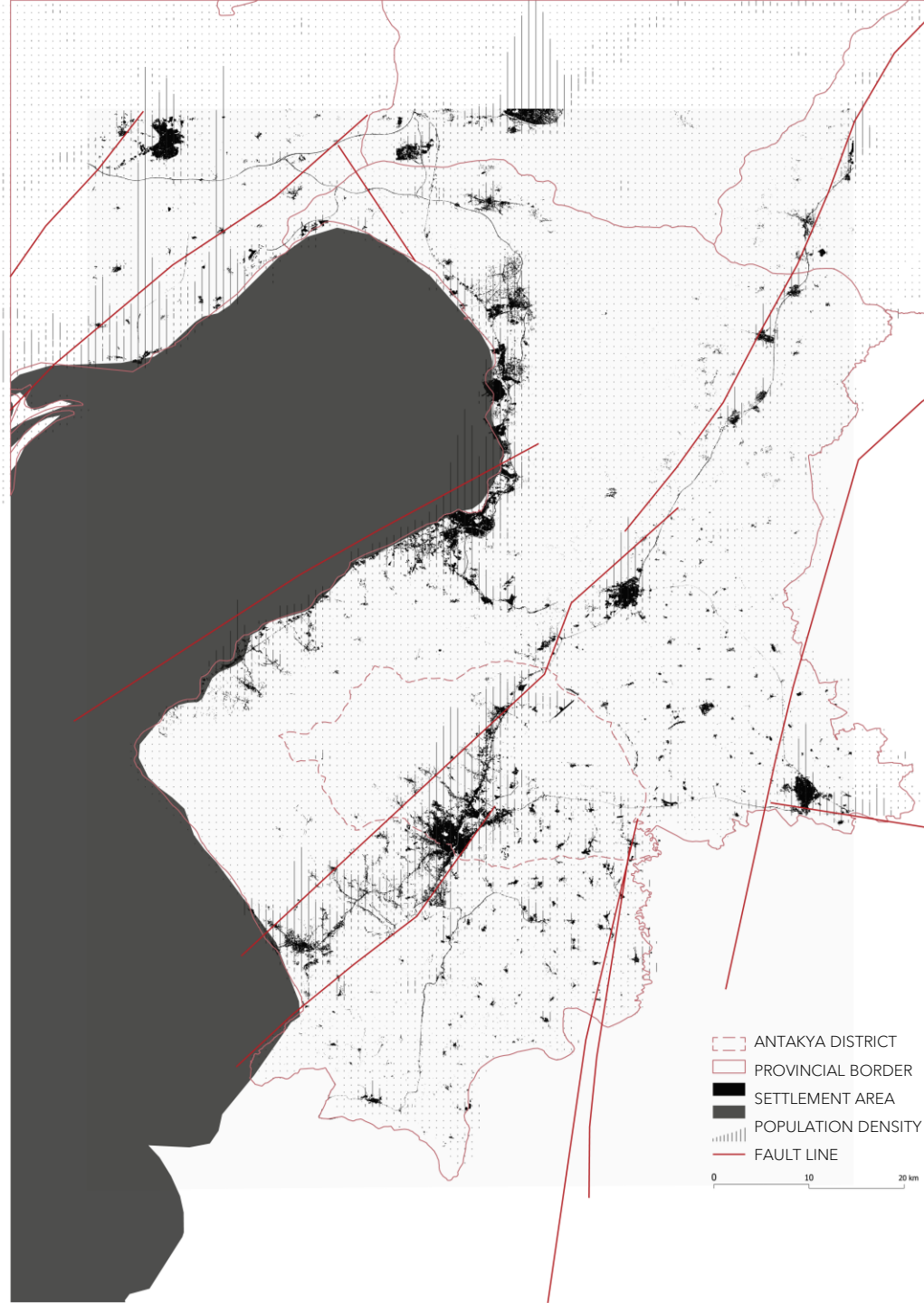


LANDSCAPE HERITAGE IN POST- EARTHQUAKE CITIES: **THE PALIMPSEST OF ANTAKYA**

Student: Aylin Yazici 6083455
Advisors: Prof. ir. Eric A. J. Luiten
Prof. ir. Tess Broekmans

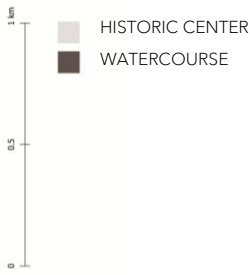
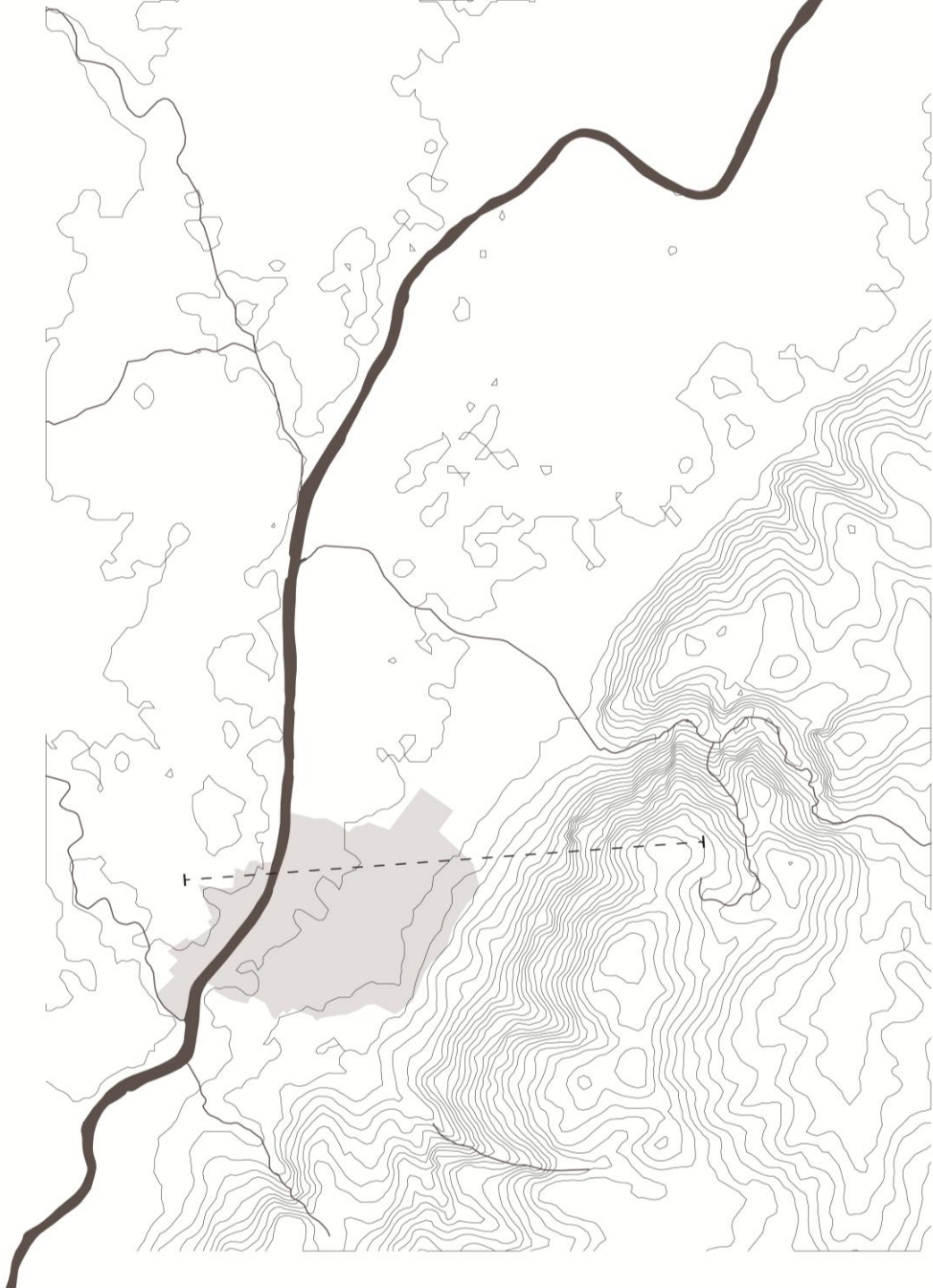
MSc Landscape Architecture, 2025
TU Delft, Faculty of Architecture and the Built Environment

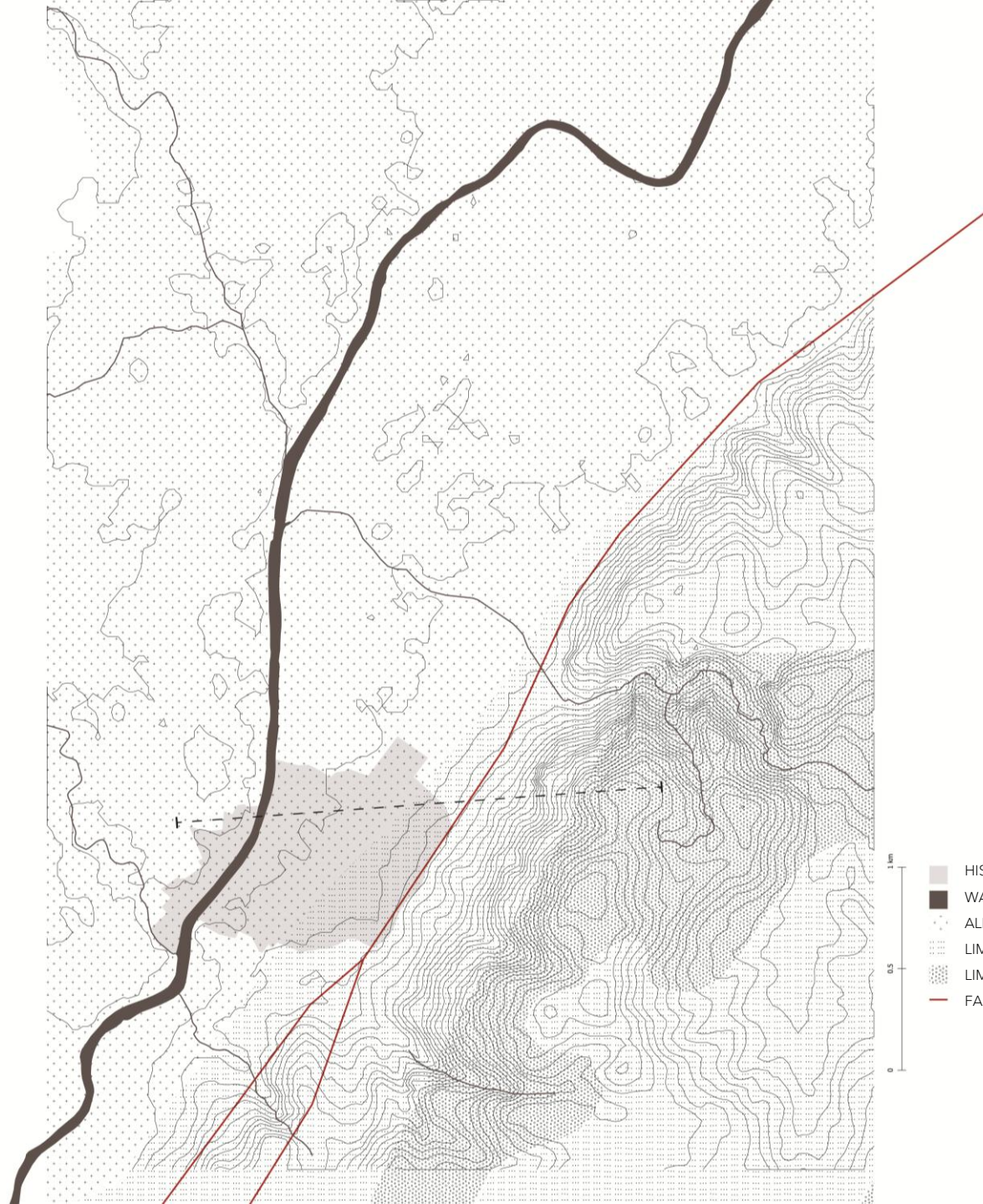




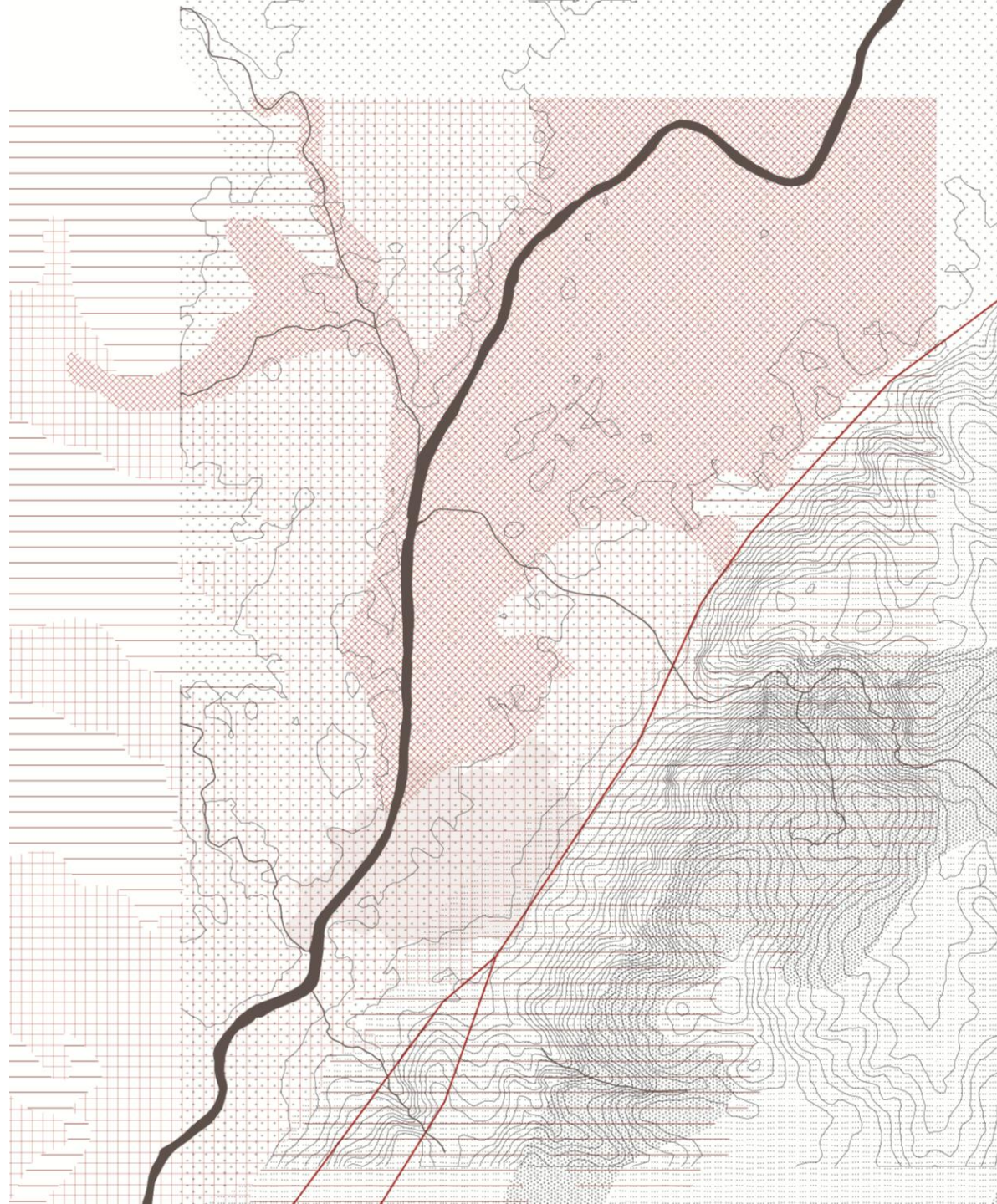
Antakya Main District of the Hatay Province,
population: ~400.000










Three tectonic plates
Highly vulnerable to earthquakes





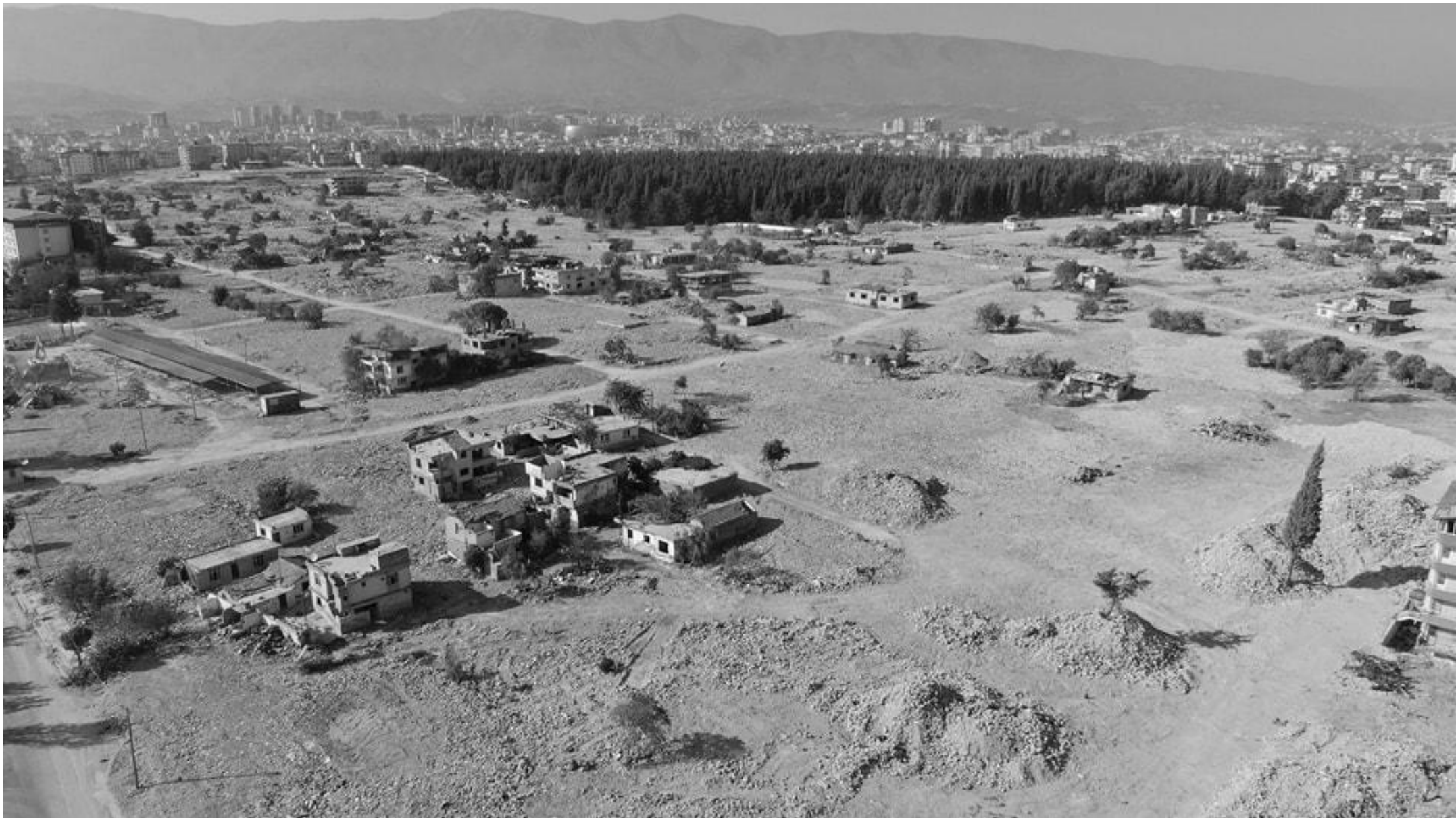
- HISTORIC CENTER
- WATERCOURSE
- ALLUVIAL SOIL
- LIMESTONE MIX
- LIMESTONE
- FAULT LINE



-  HISTORIC CENTER
-  WATERCOURSE
-  ALLUVIAL SOIL
-  LIMESTONE MIX
-  LIMESTONE
-  FAULT LINE
-  VERY SOFT SOIL
-  SOFT SOIL
-  STRONG GROUND









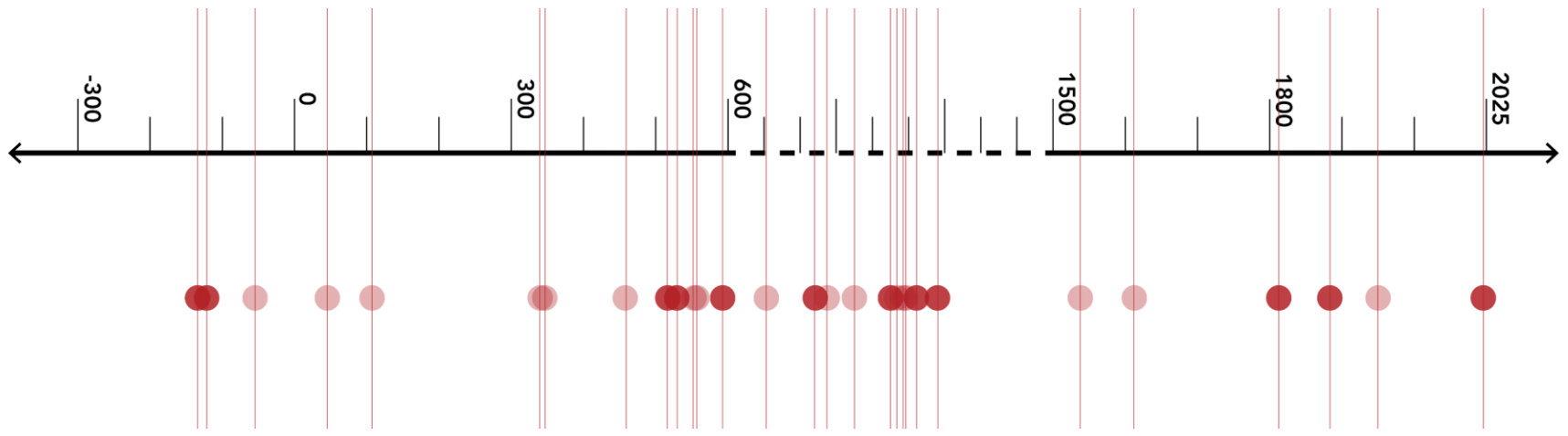


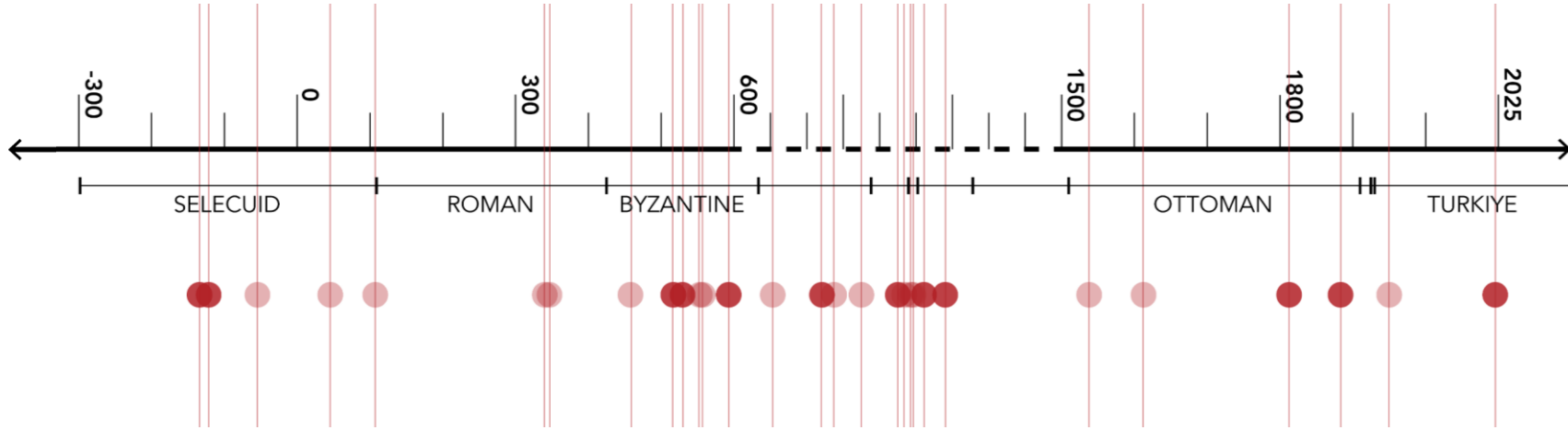


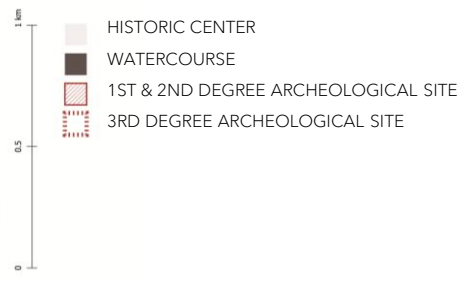
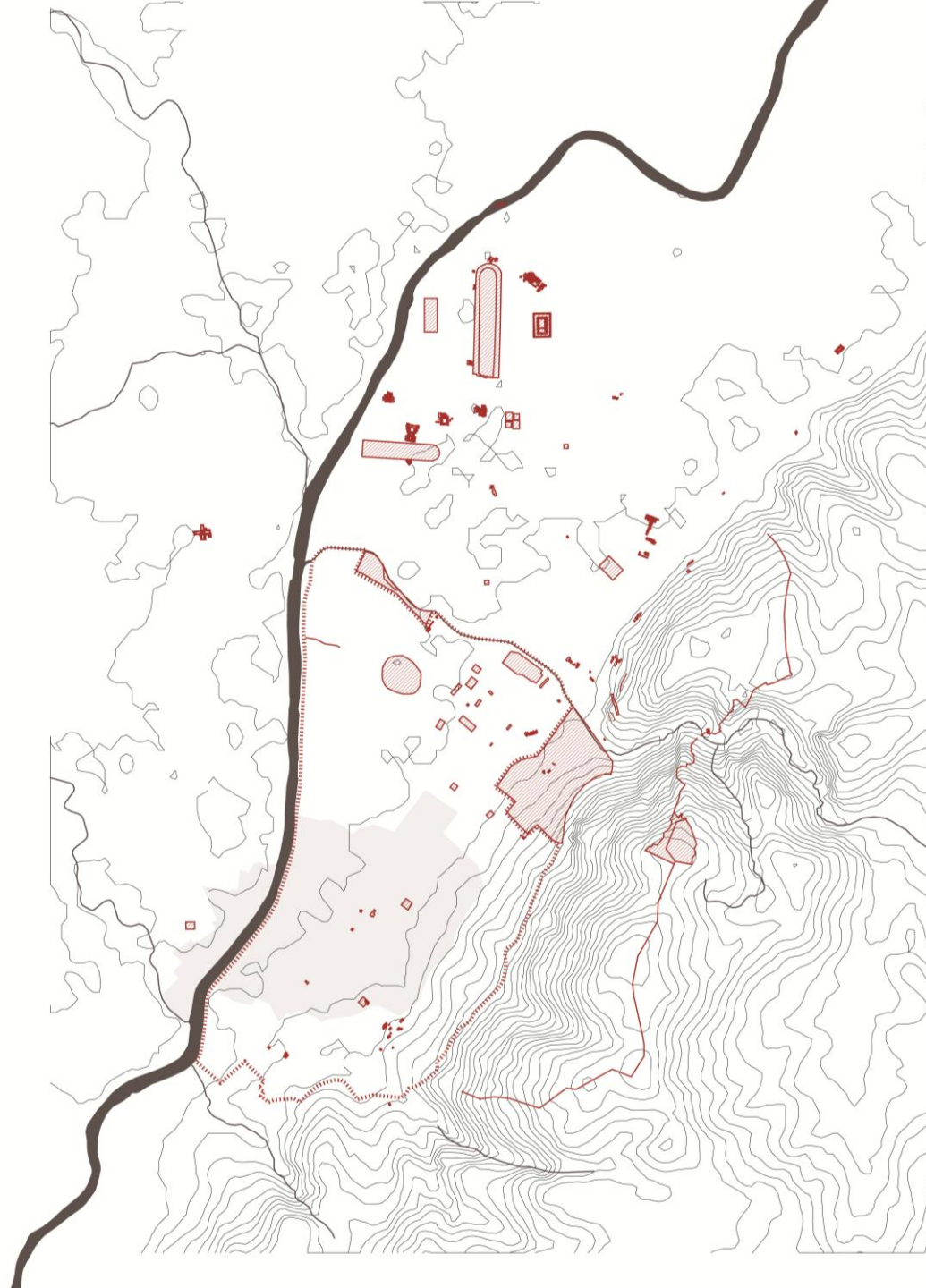




GRANDE CRETTO DI BURRI, GIBELLINA, SICILY BY ARTIST ALBERTO BURRI







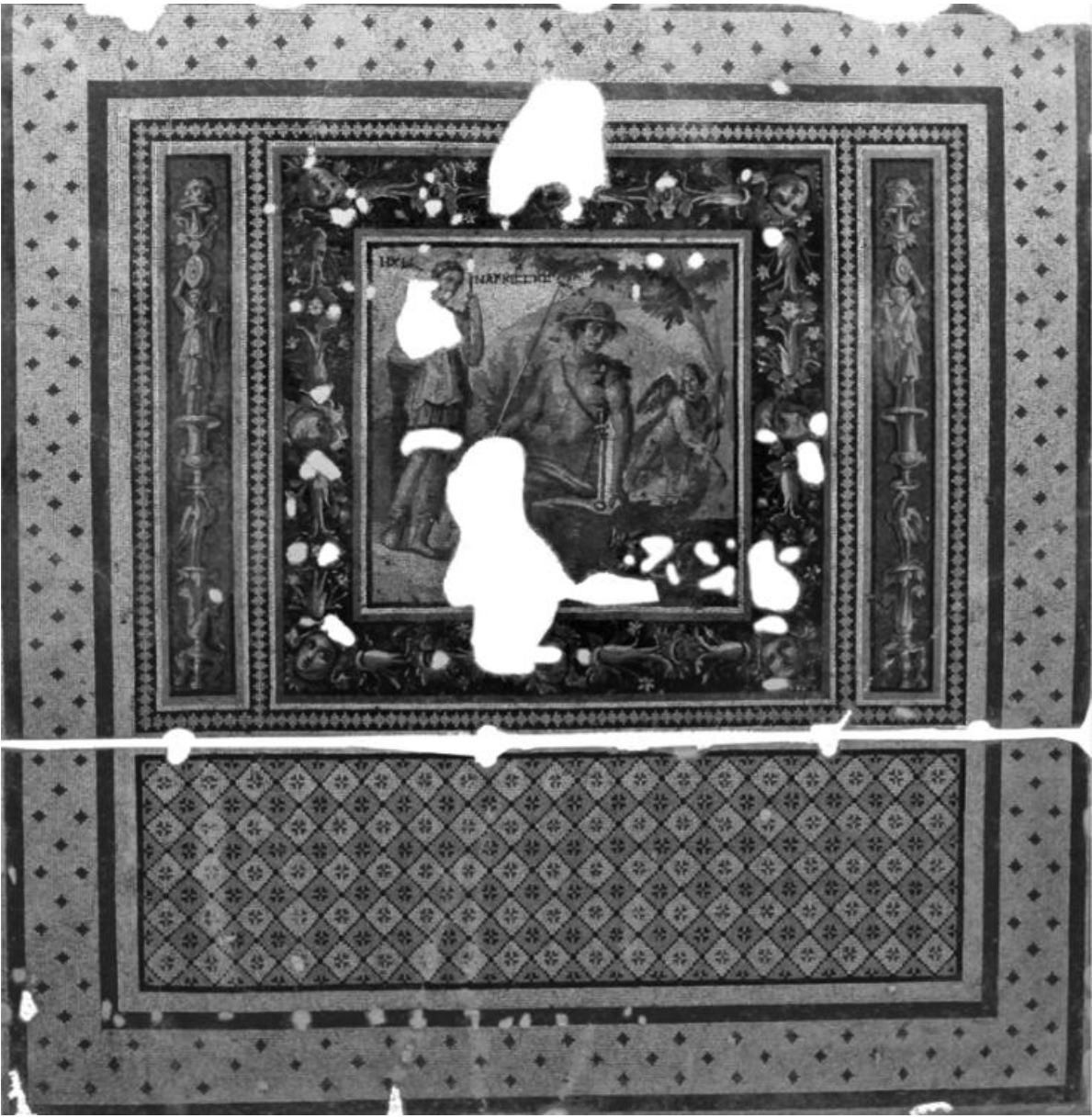








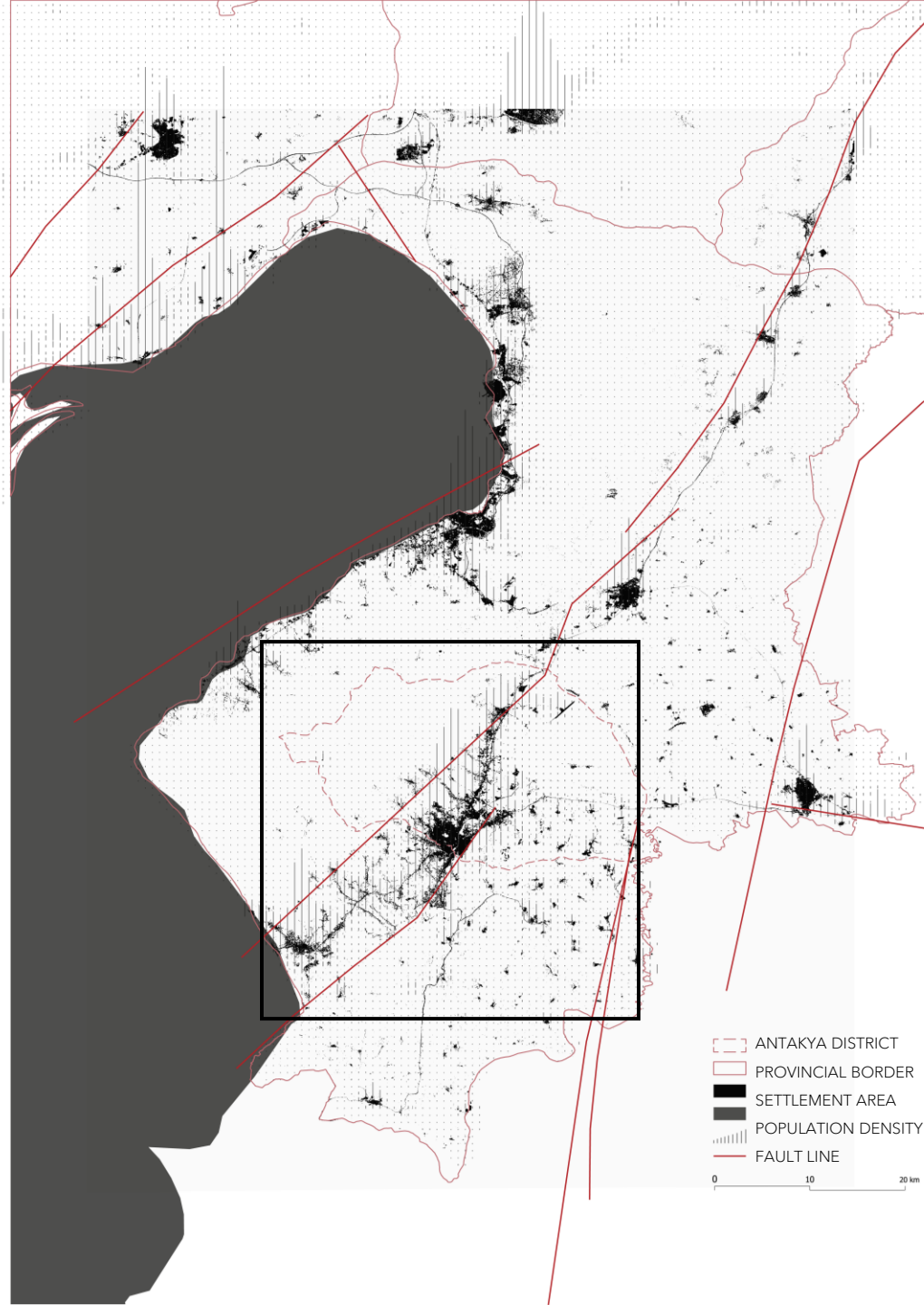








Antakya's cultural landscape, shaped by centuries of diverse civilizations, faces the threat of losing its historical layers and identity after the 2023 earthquakes.



How can landscape architecture contribute to the continuity of cultural heritage in post-earthquake cities?

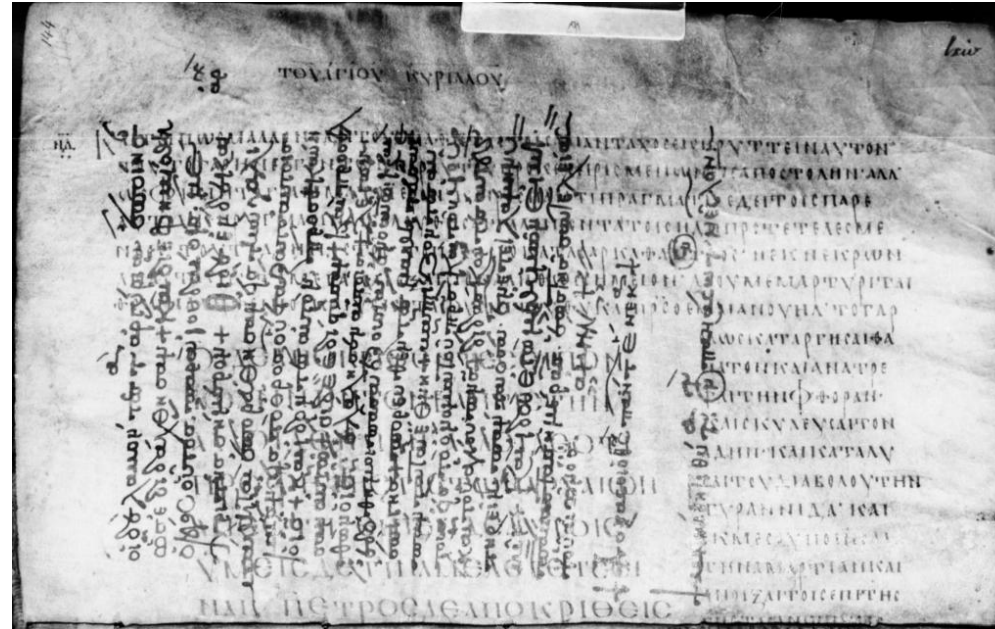
What are the natural characteristics that contribute to the identity of the site?

What are the key historical and cultural layers defining the heritage of Antakya?

What landscape architecture strategies can sustain cultural continuity?

How can the palimpsest be translated into a spatial design proposal?

<i>PHASE</i>	<i>RESEARCH FOCUS</i>	<i>METHODS</i>	<i>CHAPTER</i>	<i>RESEARCH QUESTION</i>
CONCEPT	Theoretical positioning	Literature review	I. Landscape as a Library	Overarching framework
CONTEXT	Site framing and problem definition	Framing of research questions	II. Scoping the Study	Main RQ
ANALYSIS	City development over time	Archival research, mapping, historical layering	III. Stories waiting to be told	RQ 1
SYNTHESIS	Landscape heritage over time	Landscape morphology, cataloging, archival research, mapping,	IV. Transformation on the Landscape	RQ 2
DESIGN	Spatial Proposal	Precedent Study, concept and strategy development, design explorations, planning, detailing	V. Heritage Landscape Precedents	RQ 3
			VI. Reincarnation of the Traces	RQ 4



The concept of **palimpsest**, derived from the Greek terms “palin” (again) and “psestos” (scraped), originally described manuscripts that were written, erased, and overwritten.

In spatial terms, however, it signifies the **coexistence of old and new**, where traces of the past are never entirely removed but continuously inform later layers. (Corboz, 1983).



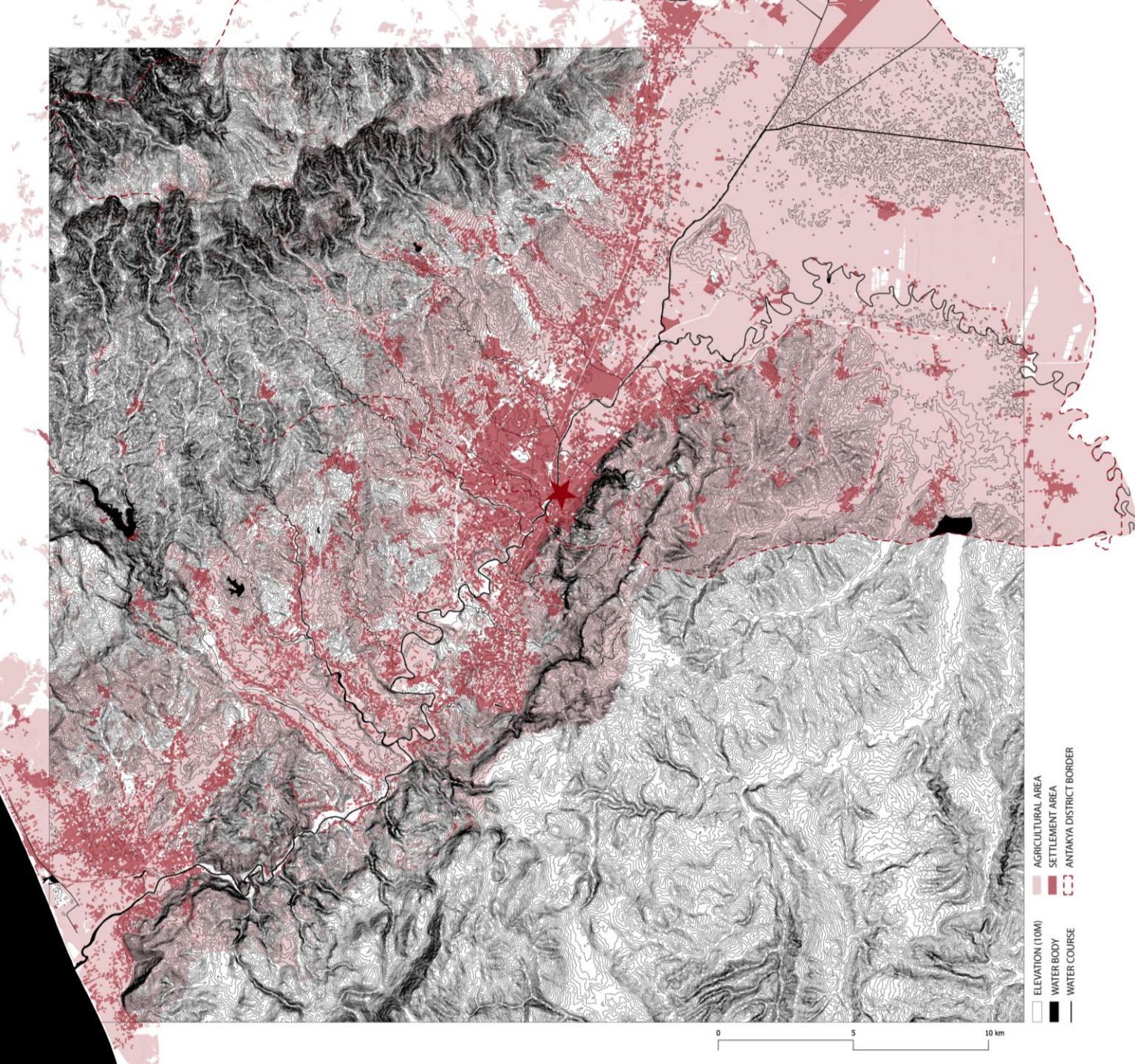
Landscape biography, developed by Kolen and Renes (2015), views **landscapes as dynamic entities** with their own **life histories**.

Evolve through **continuous interactions between people, nature, and time**, accumulating layers of meaning and material traces."



Landscape is where history, culture, and nature converge. It endures beyond built structures, **preserving traces of the past as a living "library."**

Through landscape architecture, these traces can **be revealed and made legible.**

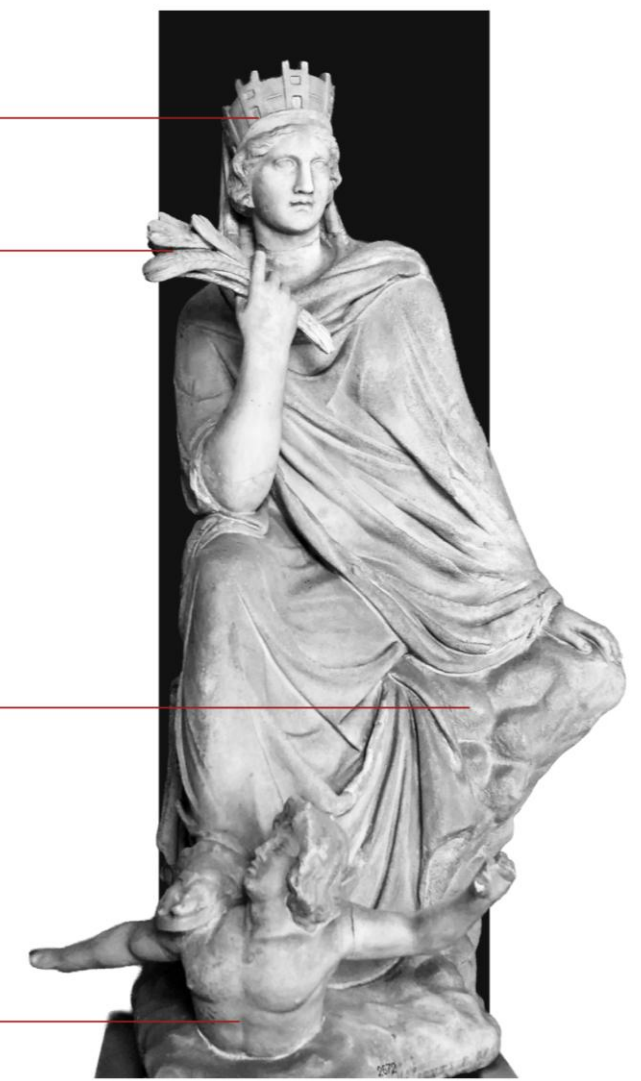


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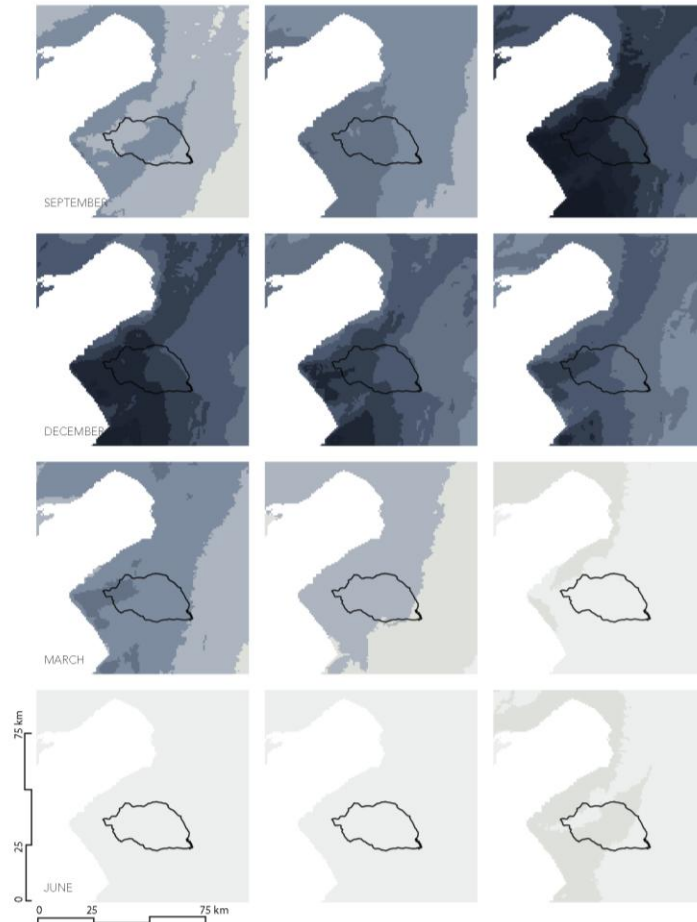
FERTILITY

NT SILPIUS

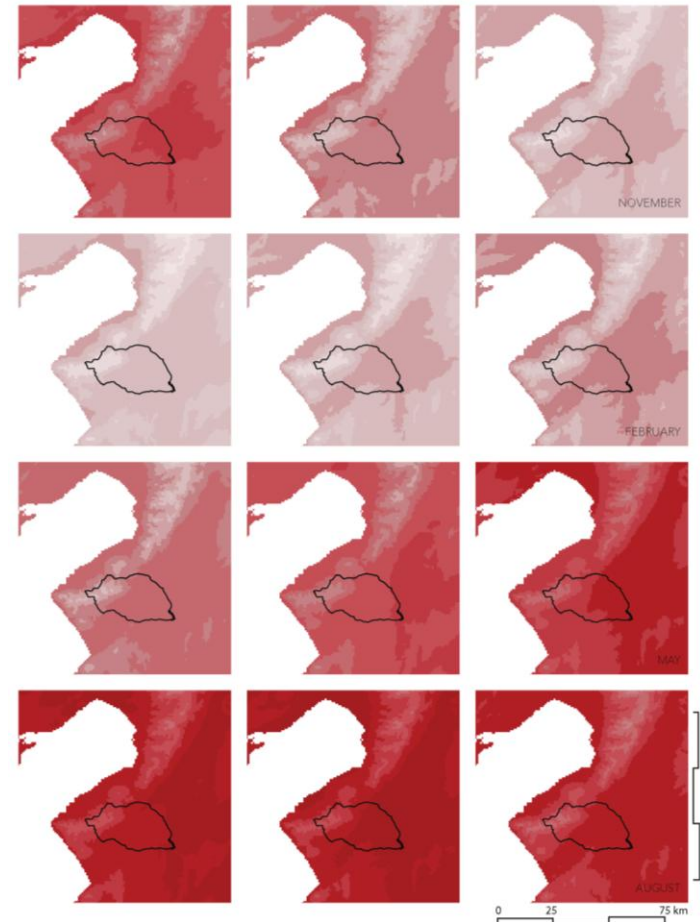
ORONTES



STORIES WAITING TO BE TOLD

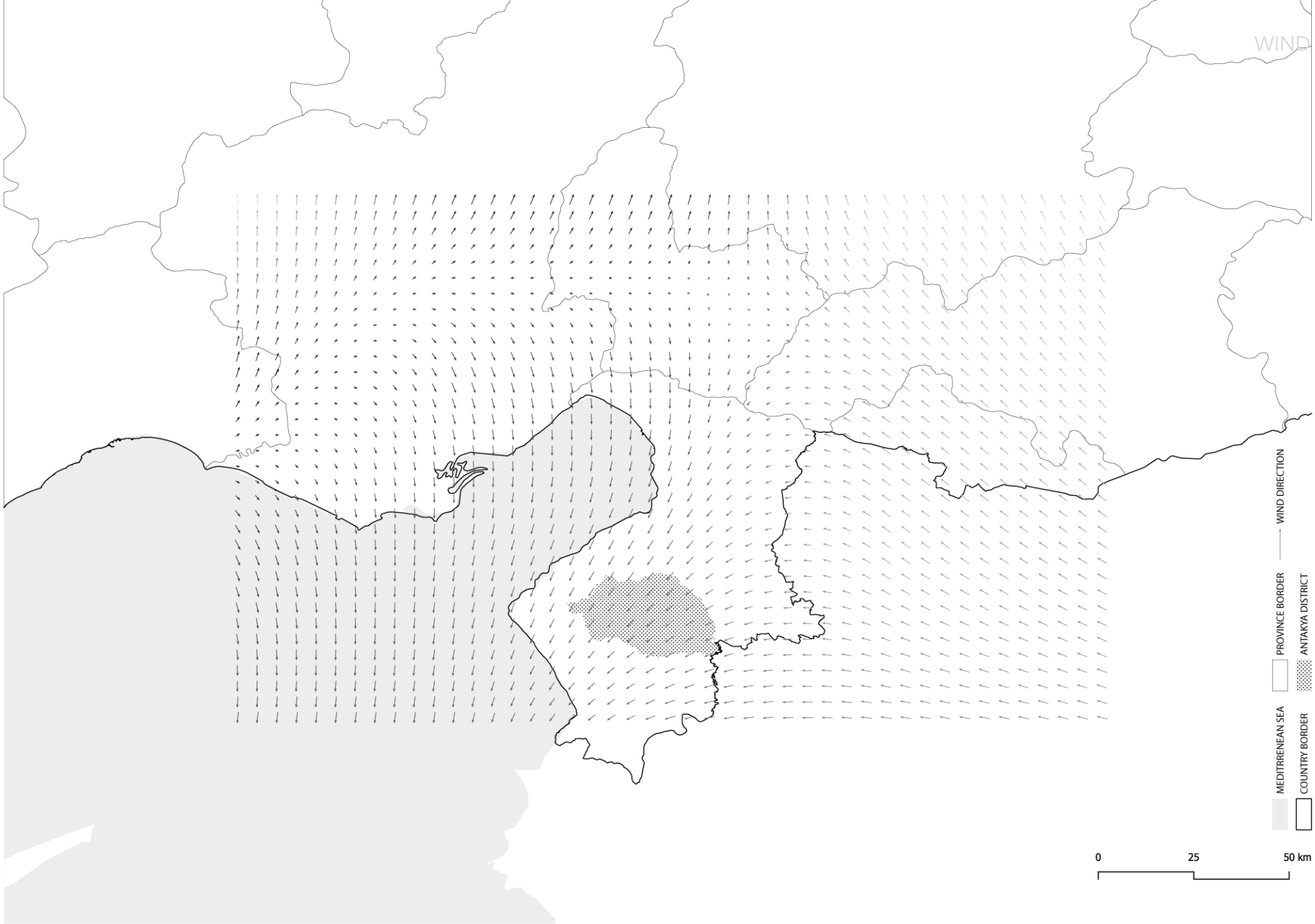


12-MONTH PRECIPITATION MAPS

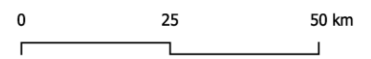


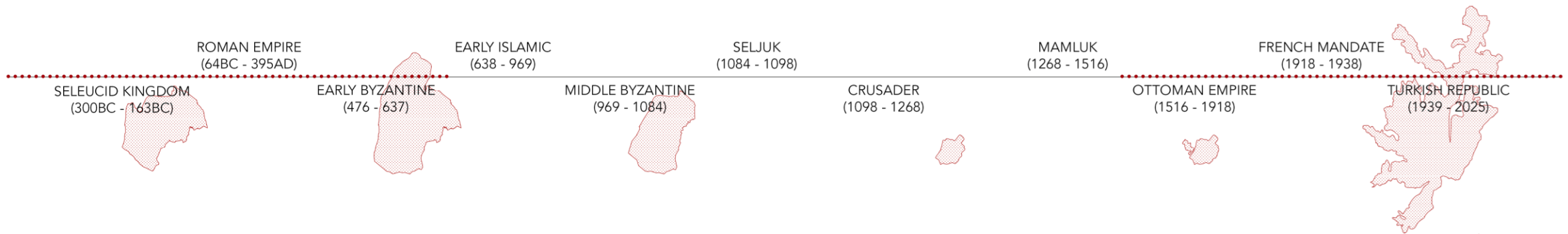
12-MONTH TEMPERATURE MAPS

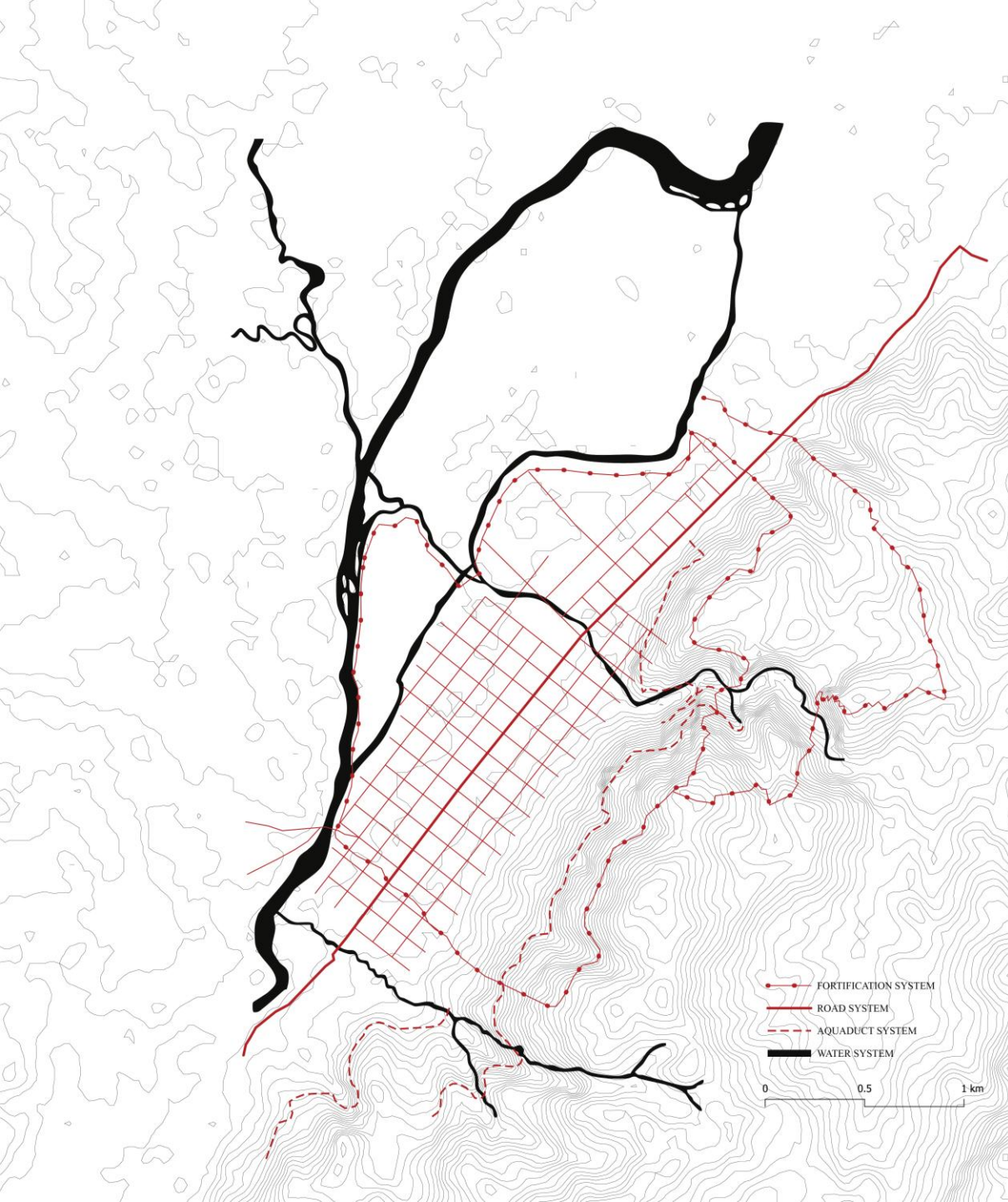




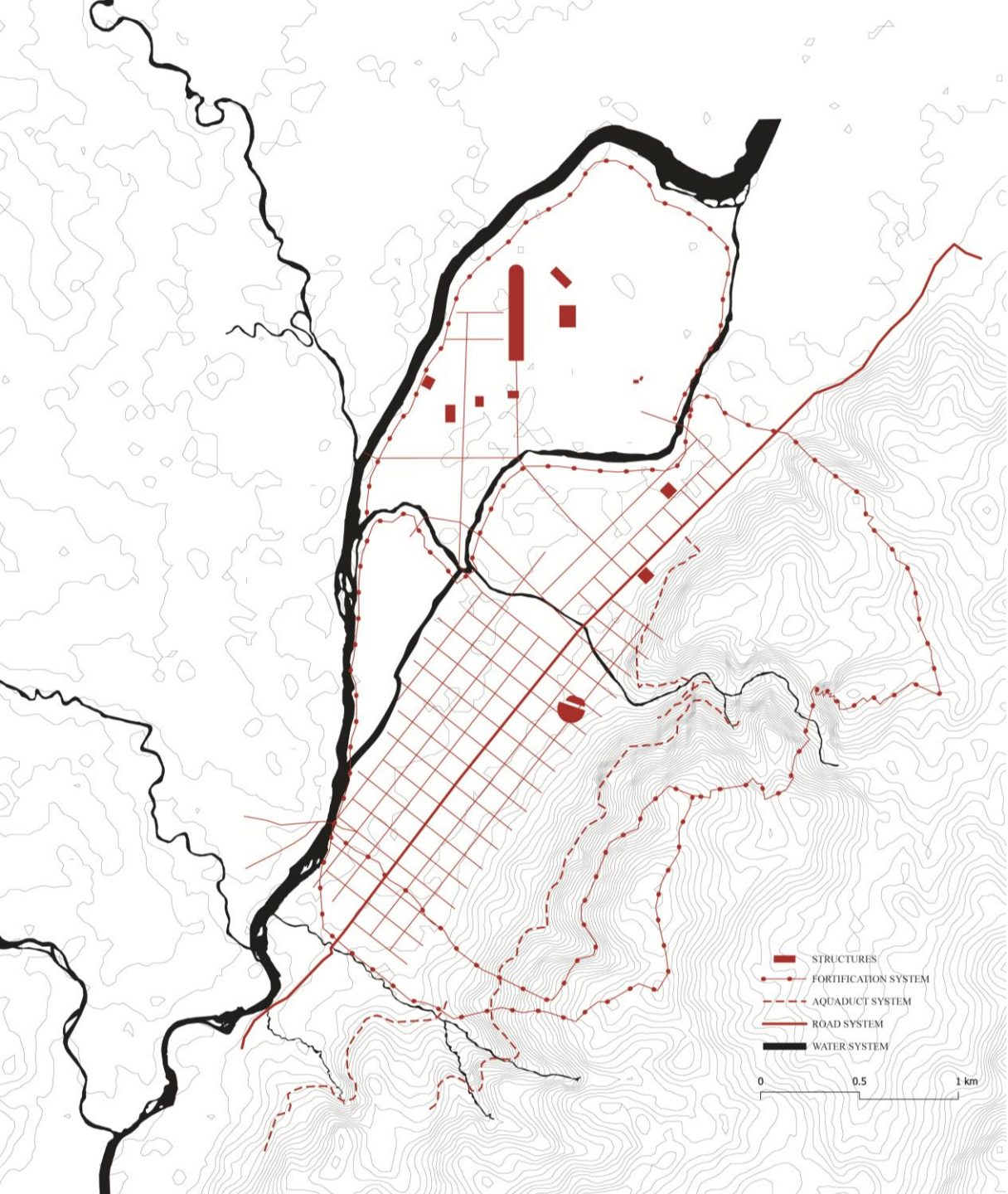
- MEDITRENEAN SEA
- COUNTRY BORDER
- PROVINCE BORDER
- ANTAKYA DISTRICT
- WIND DIRECTION





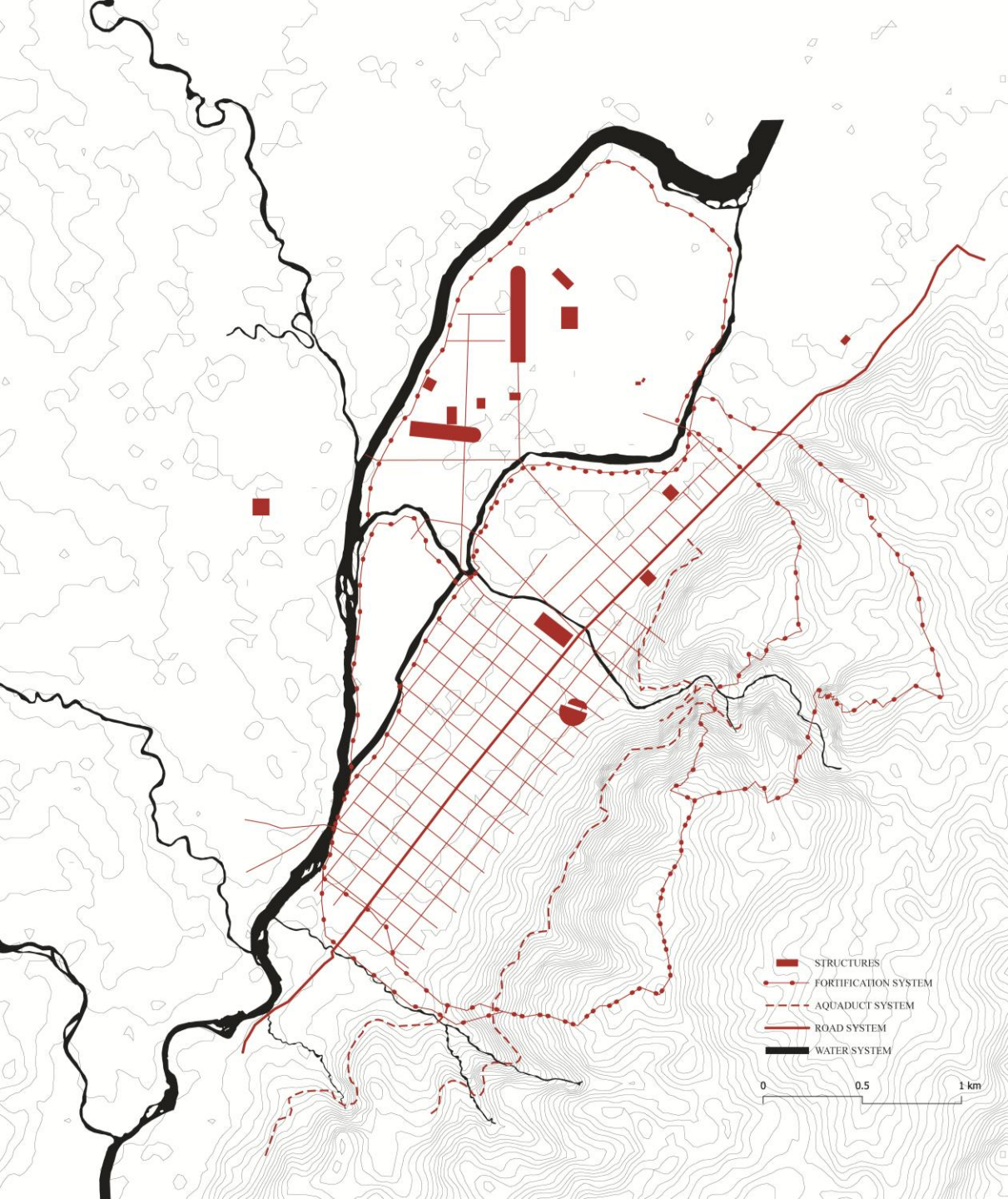


A capital in the crossroads of trade
 Boundaries by the river and mountains
 City plan and climate
 Earthquake and reconstruction

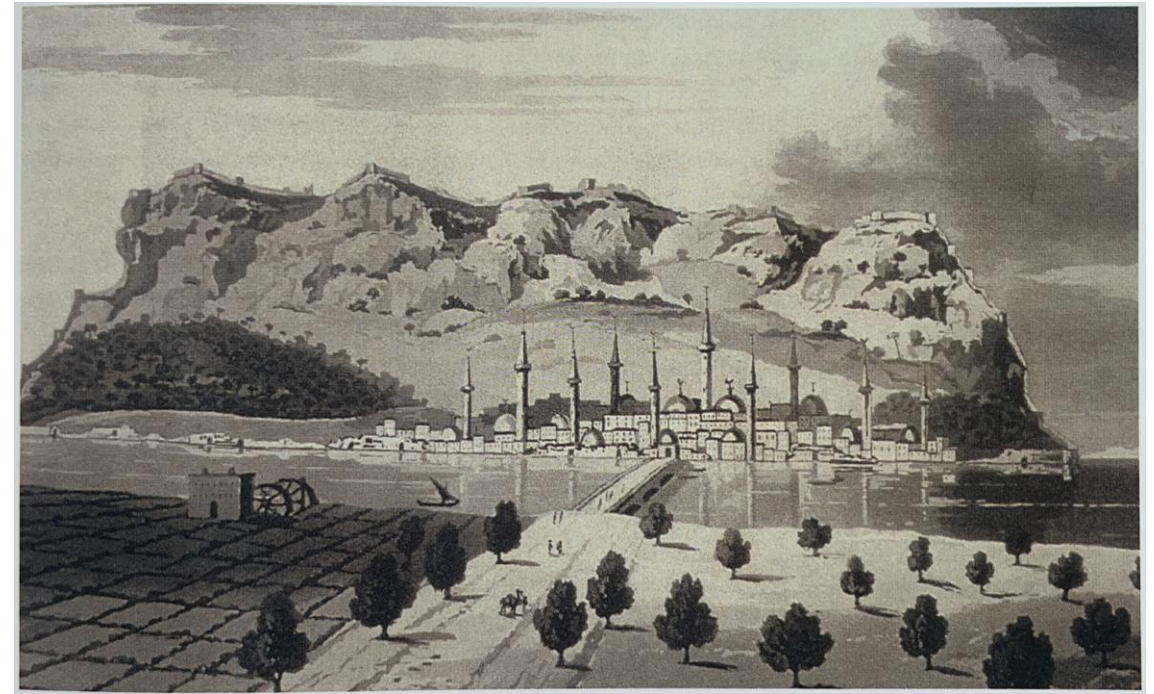
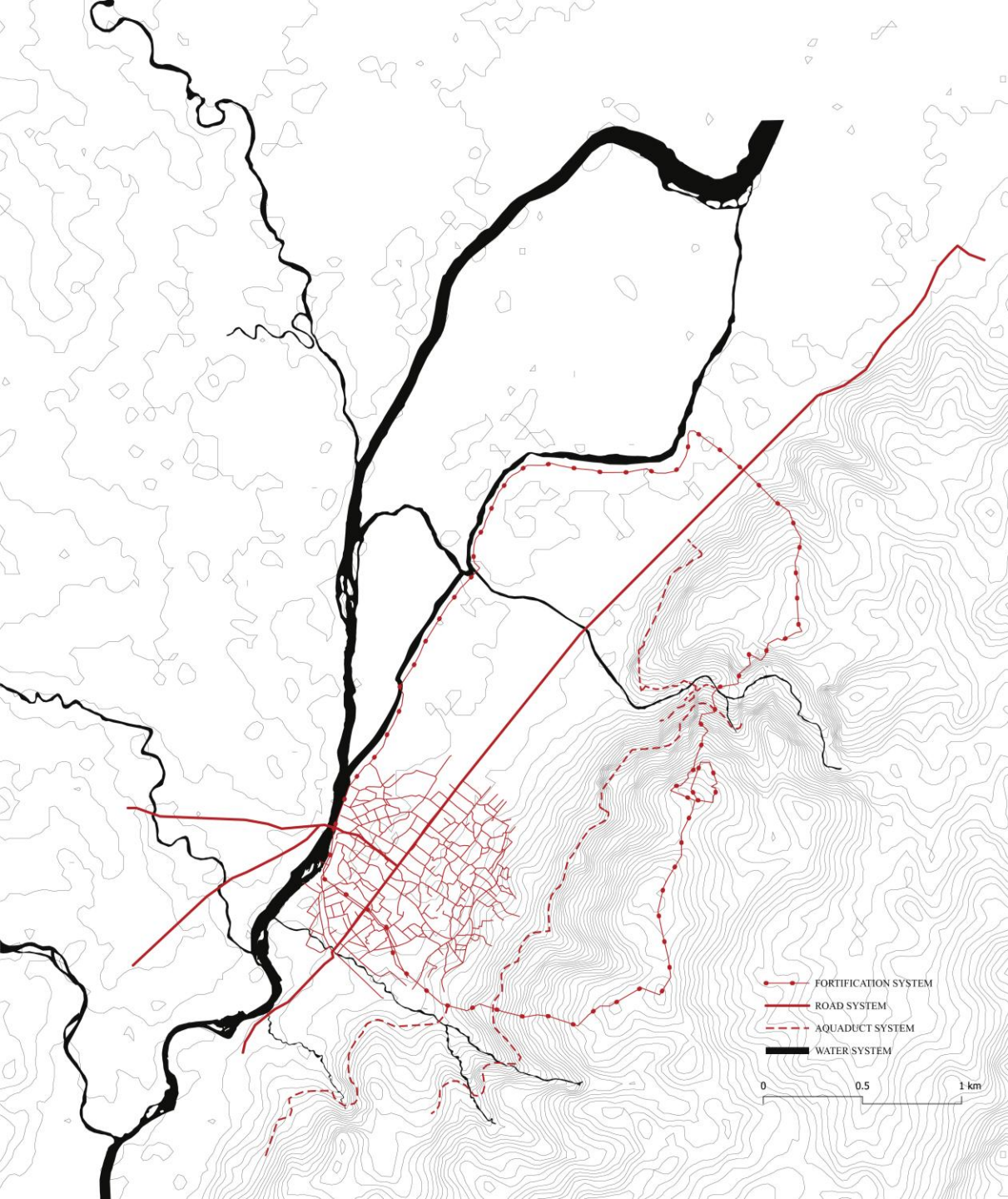


WALL ON THE WEST SIDE OF ANTIOCH.

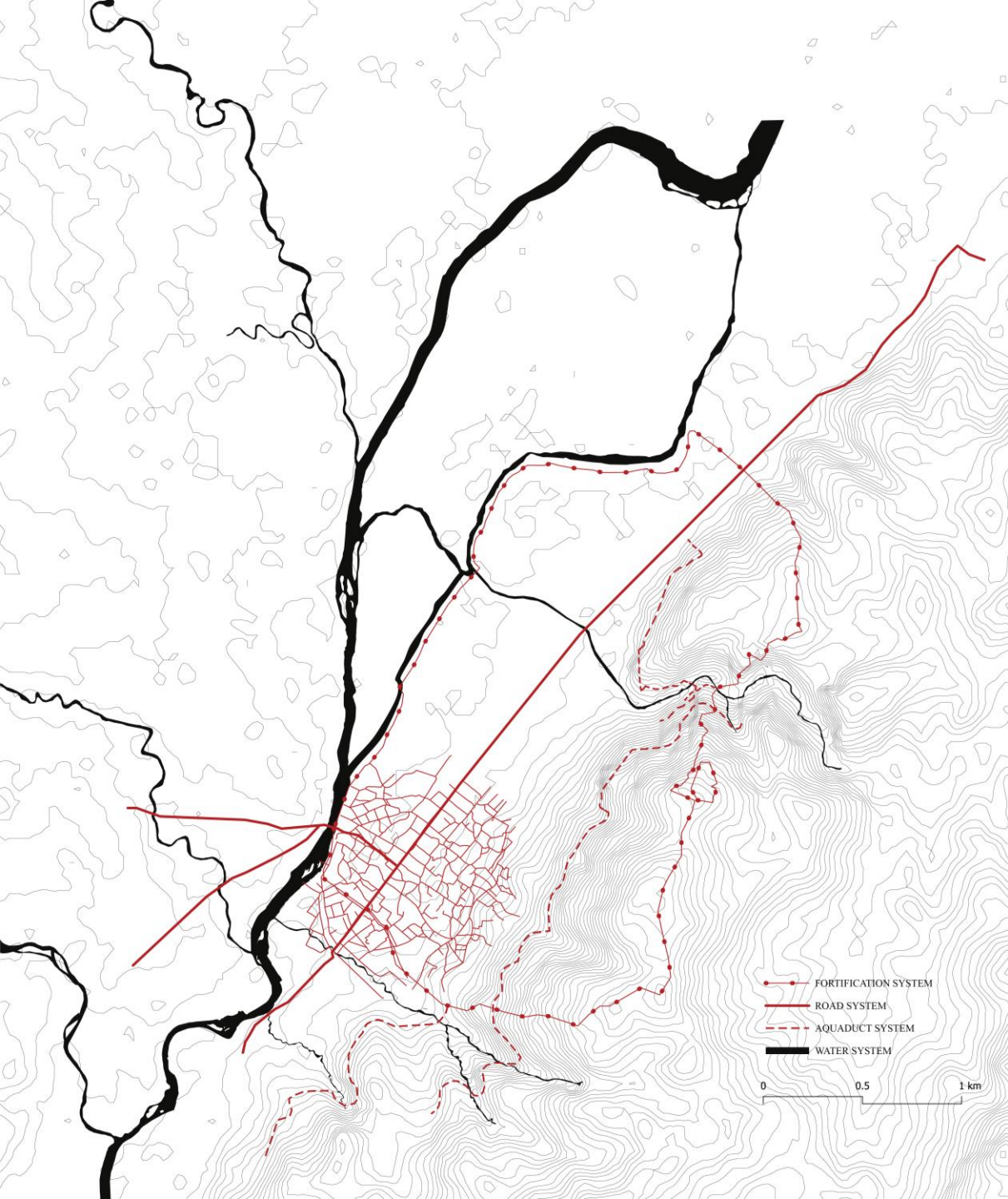
The greatest period
 Queen of the east
 Growing with fortifications
 Infrastructure and water systems
 Earthquake and reconstruction



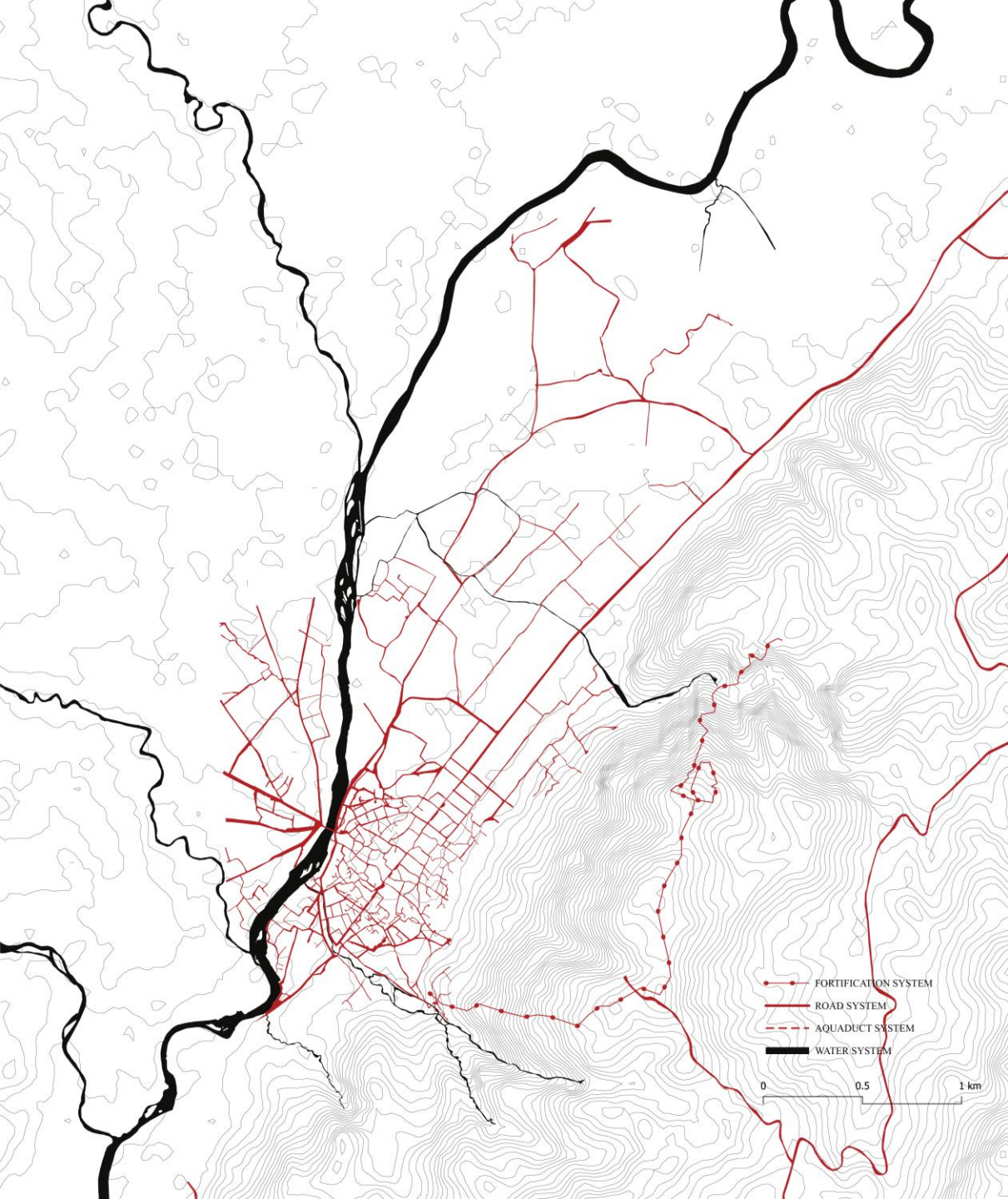
Hub of Christianity
 Repeated of destruction and reconstruction
 Cycle of material



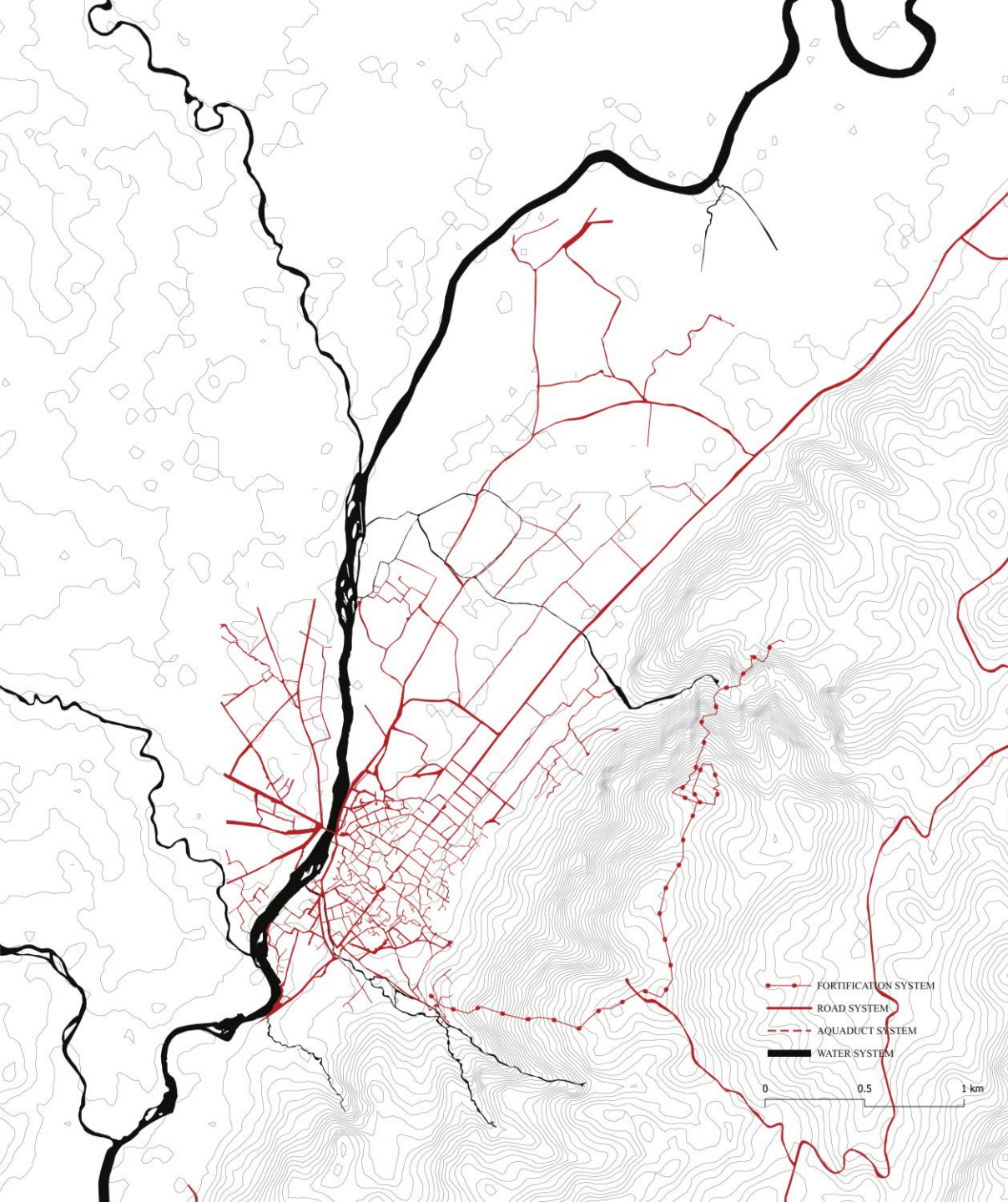
After many invasions and war
 Repeated of destruction and reconstruction
 Provincial town
 Diverse communities



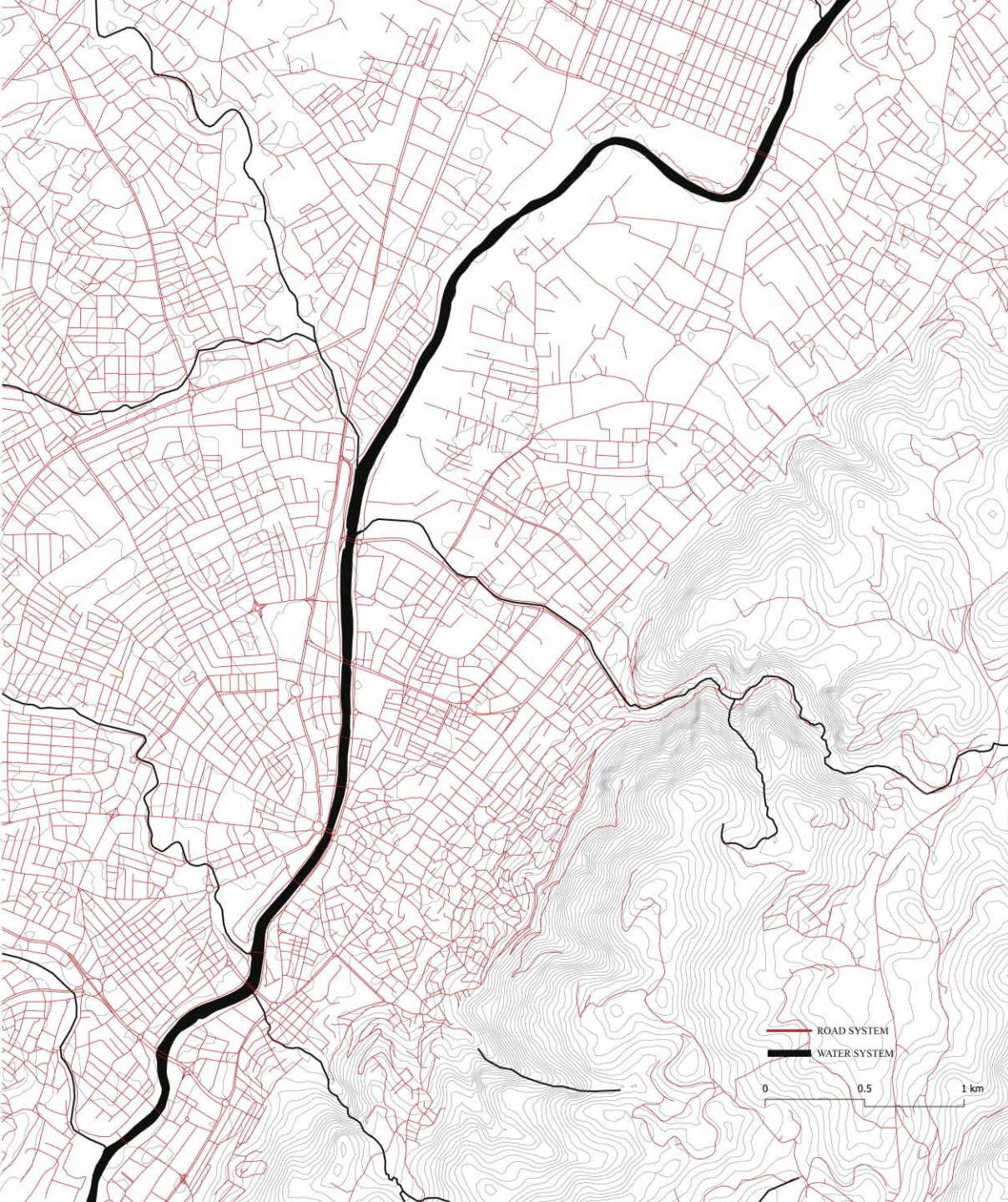
Cycle of material
 Living with the ruins
 Orchards inside the fortification



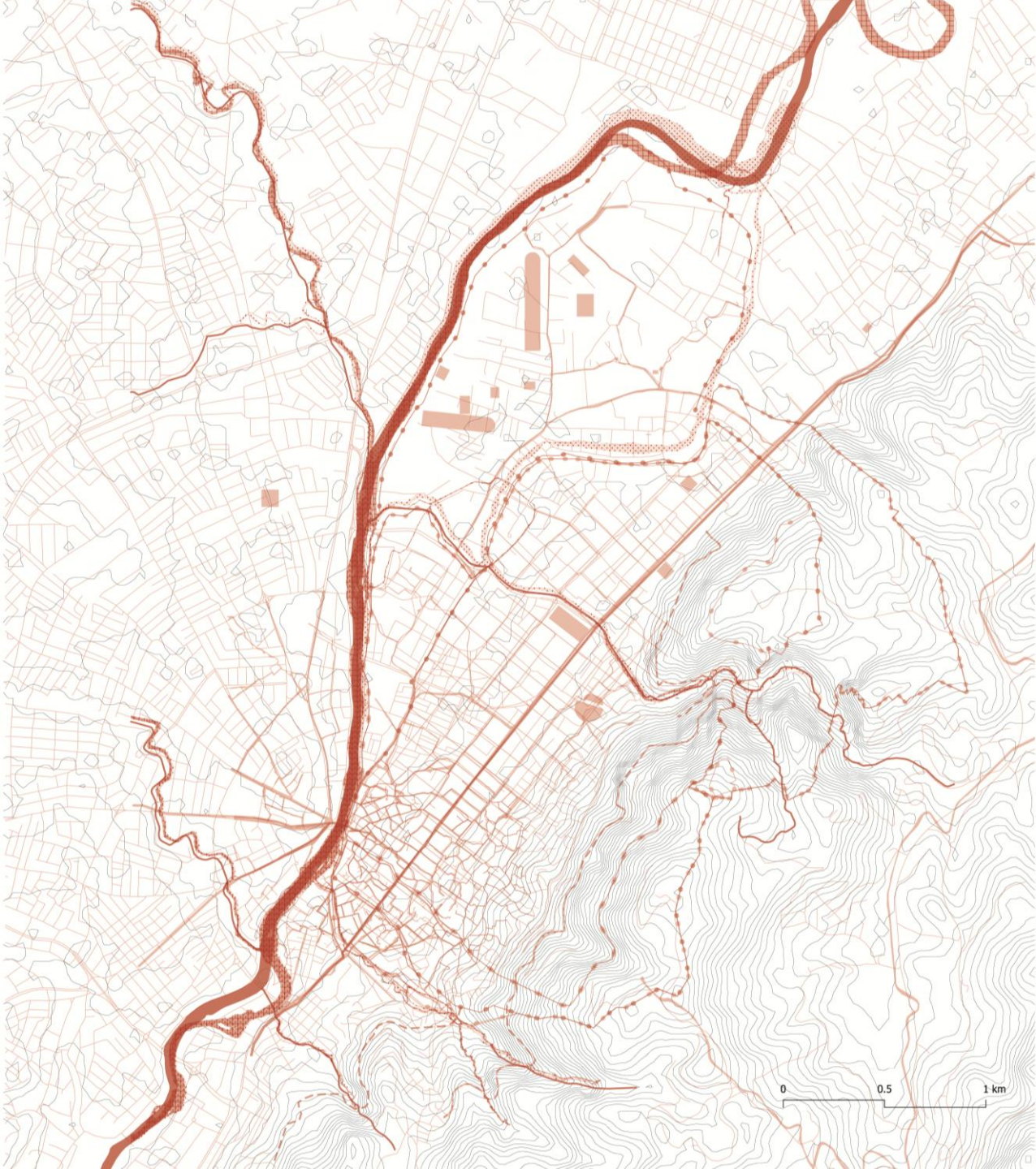
Initial modernization
Infrastructural development
New planning
Western style



Initial modernization
Infrastructural development
New planning
Western style

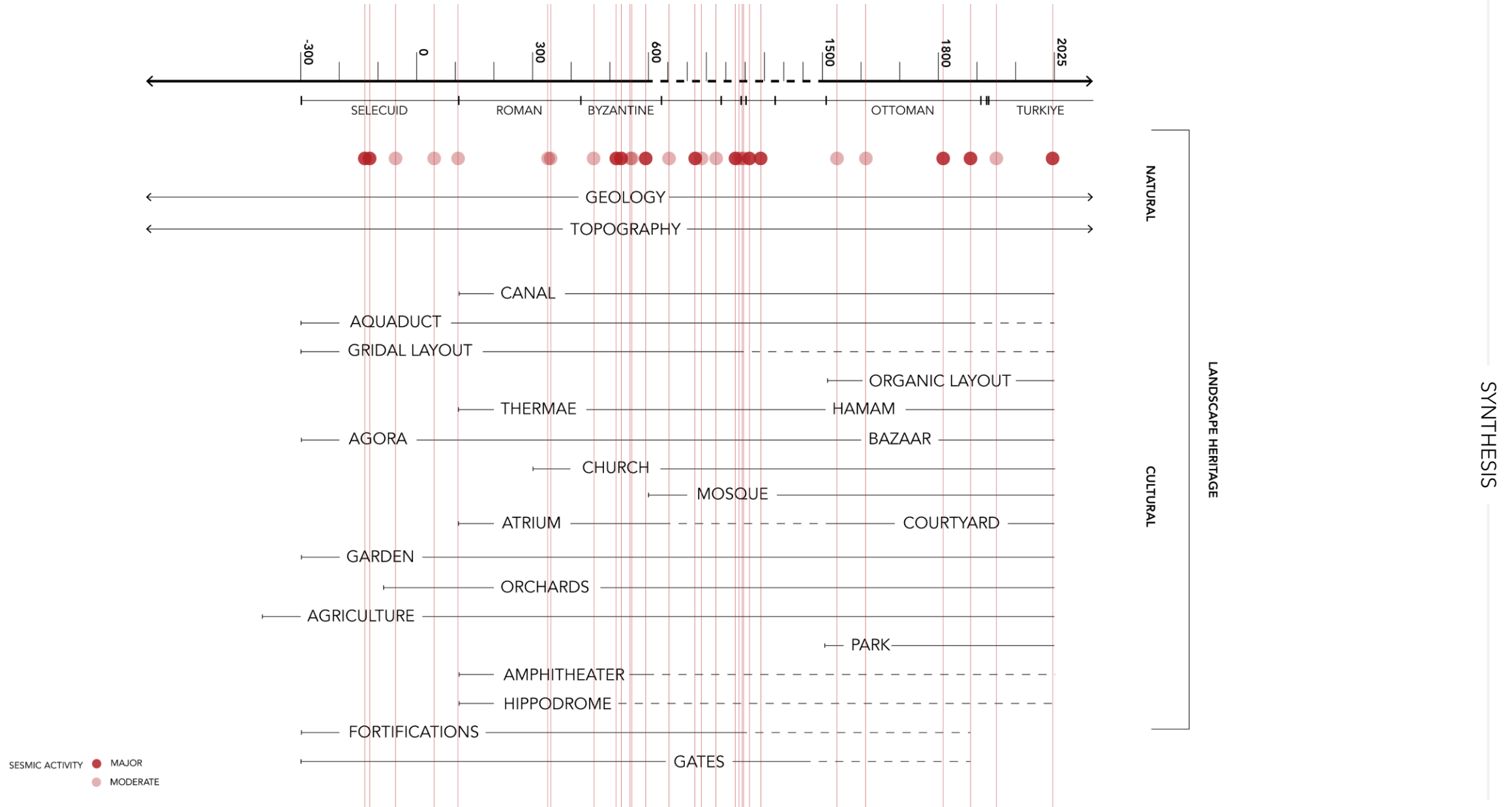


Migration
Urban expansion
Central district
Neglected heritage

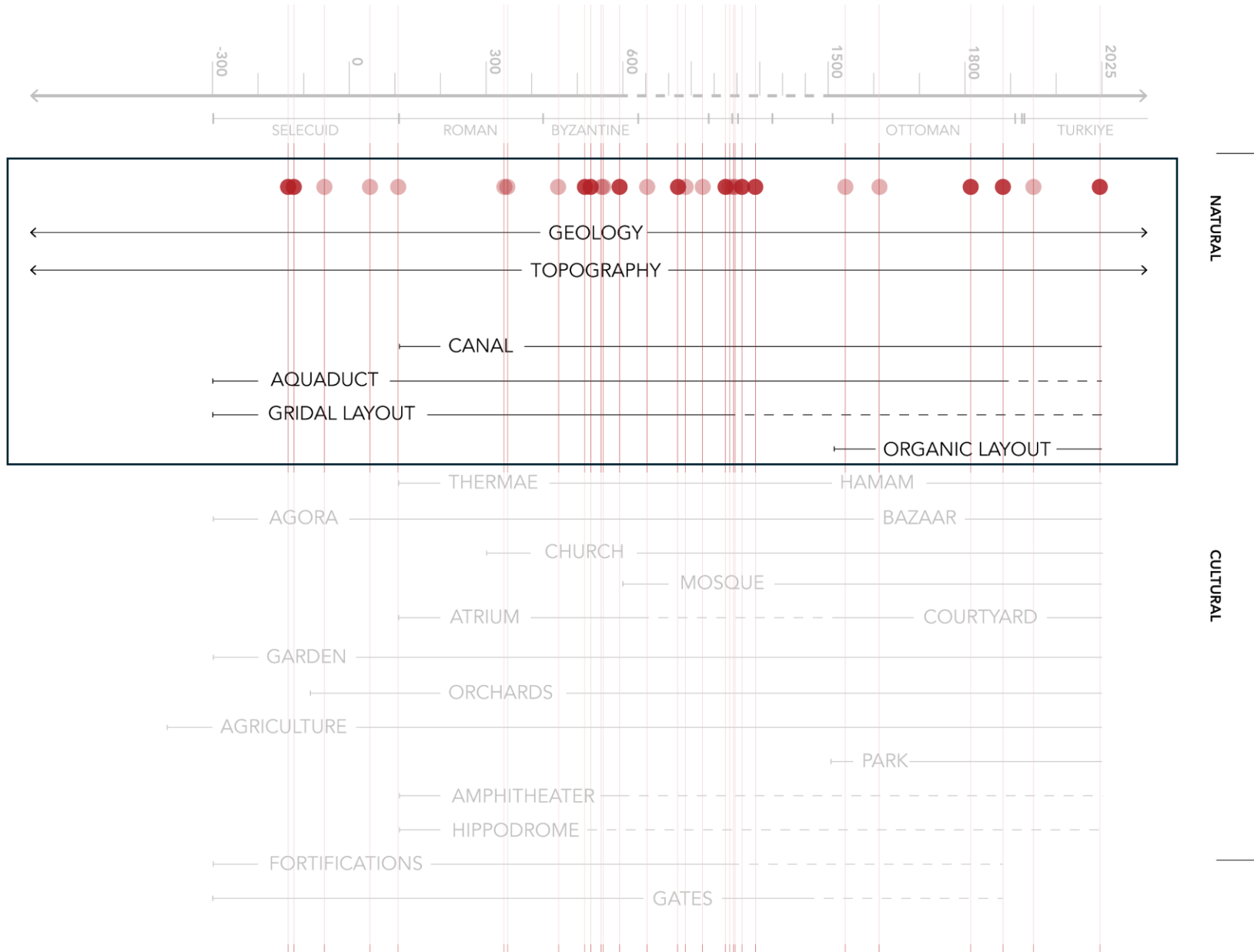


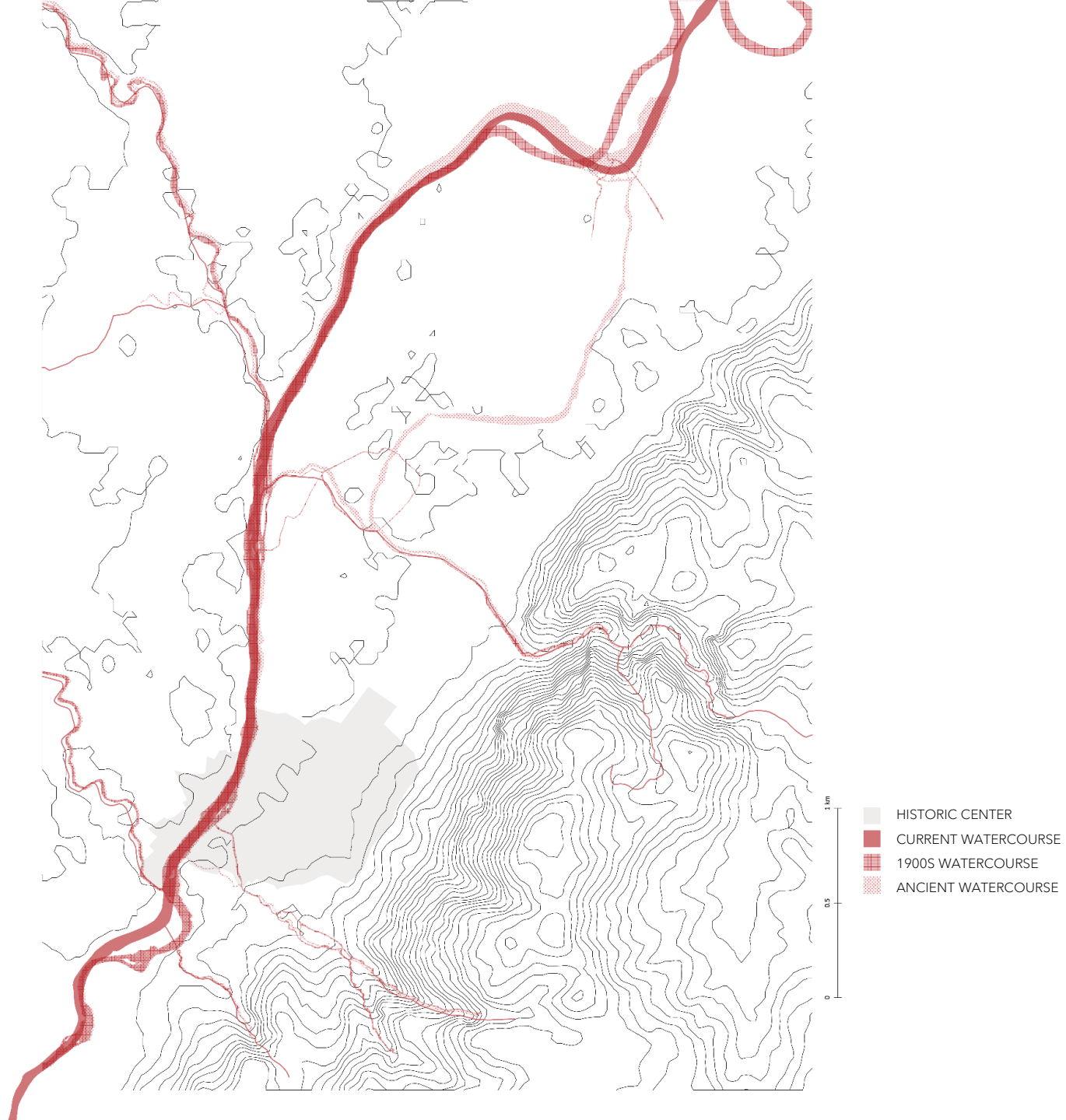
Empires, earthquakes, and cultural shifts have continuously reshaped the city, yet never erased it.

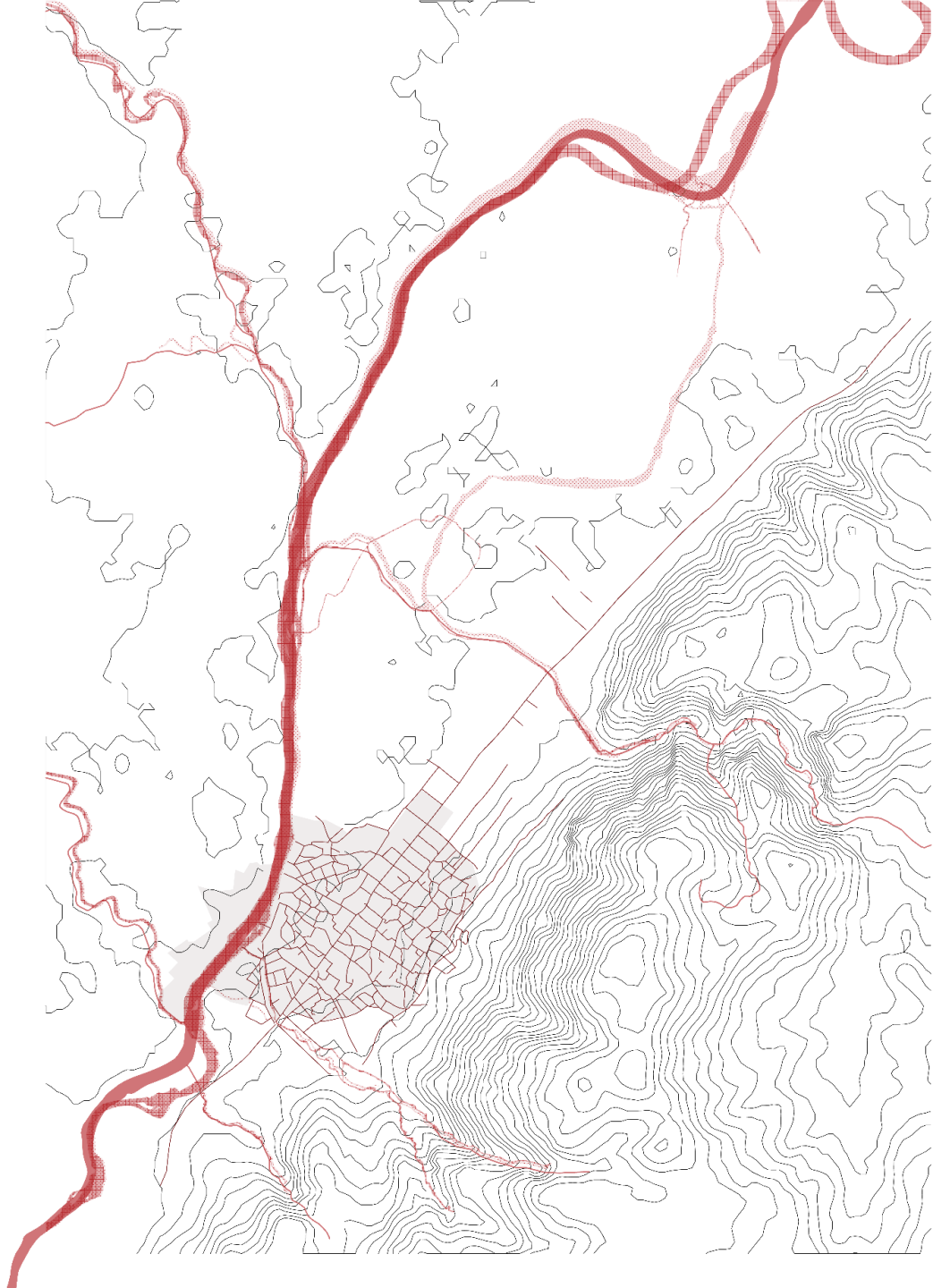
These are more than traces; they are stories of survival and continuity, guiding how we can reimagine Antakya today.



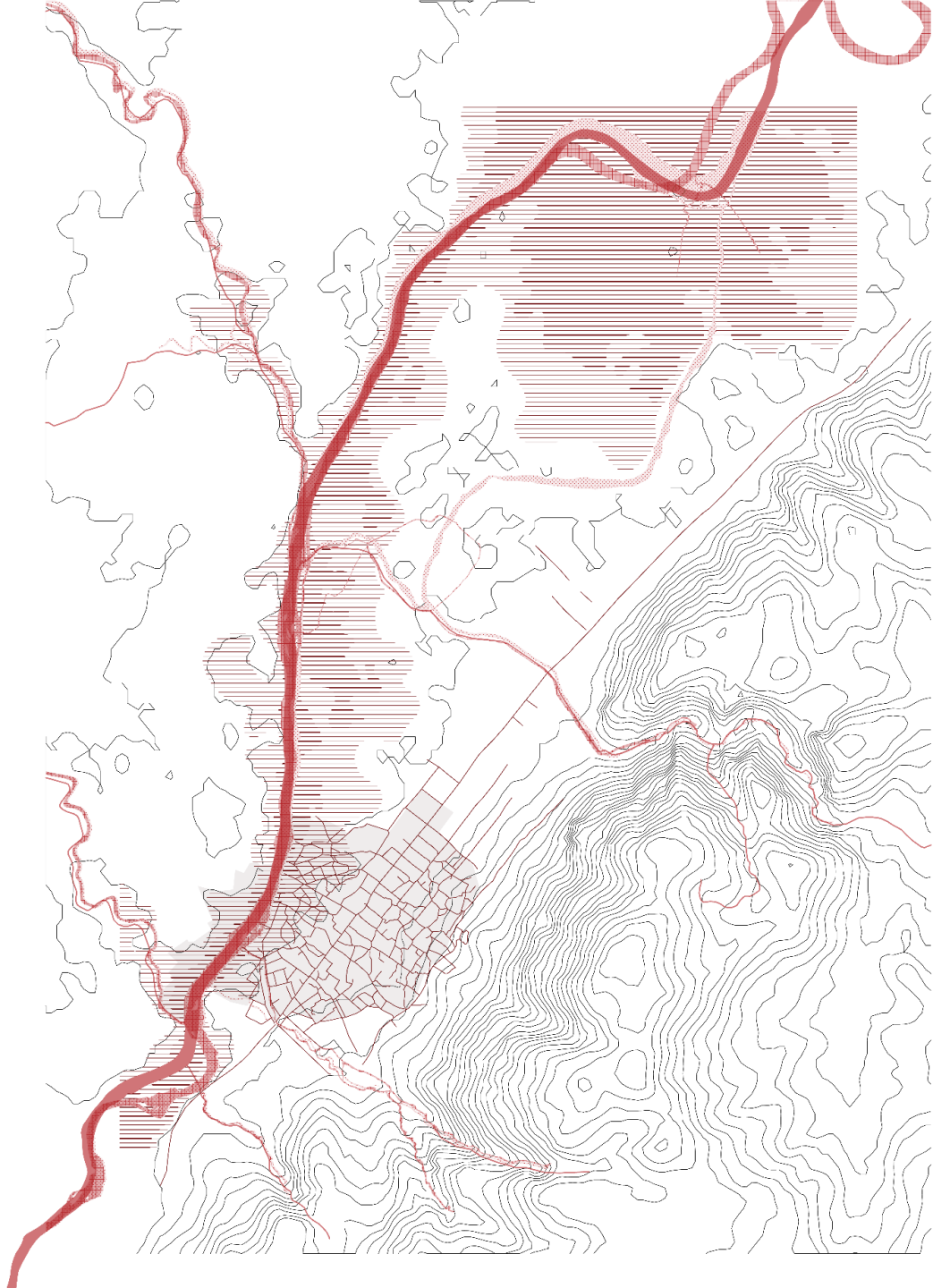
TRANSFORMATION ON THE LANDSCAPE





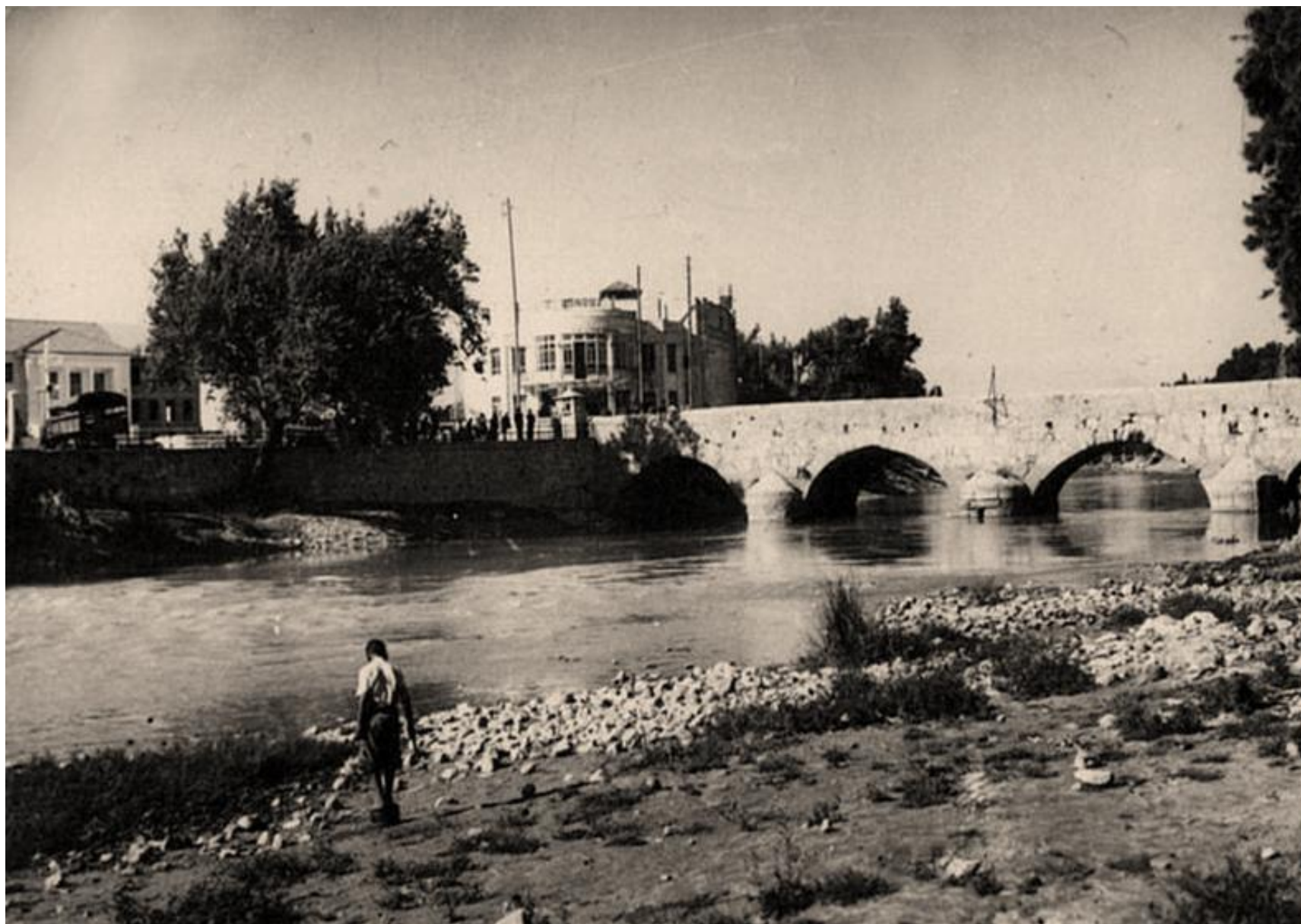


- HISTORIC CENTER
- CURRENT WATERCOURSE
- 1900S WATERCOURSE
- ANCIENT WATERCOURSE
- HISTORIC DRAINAGE



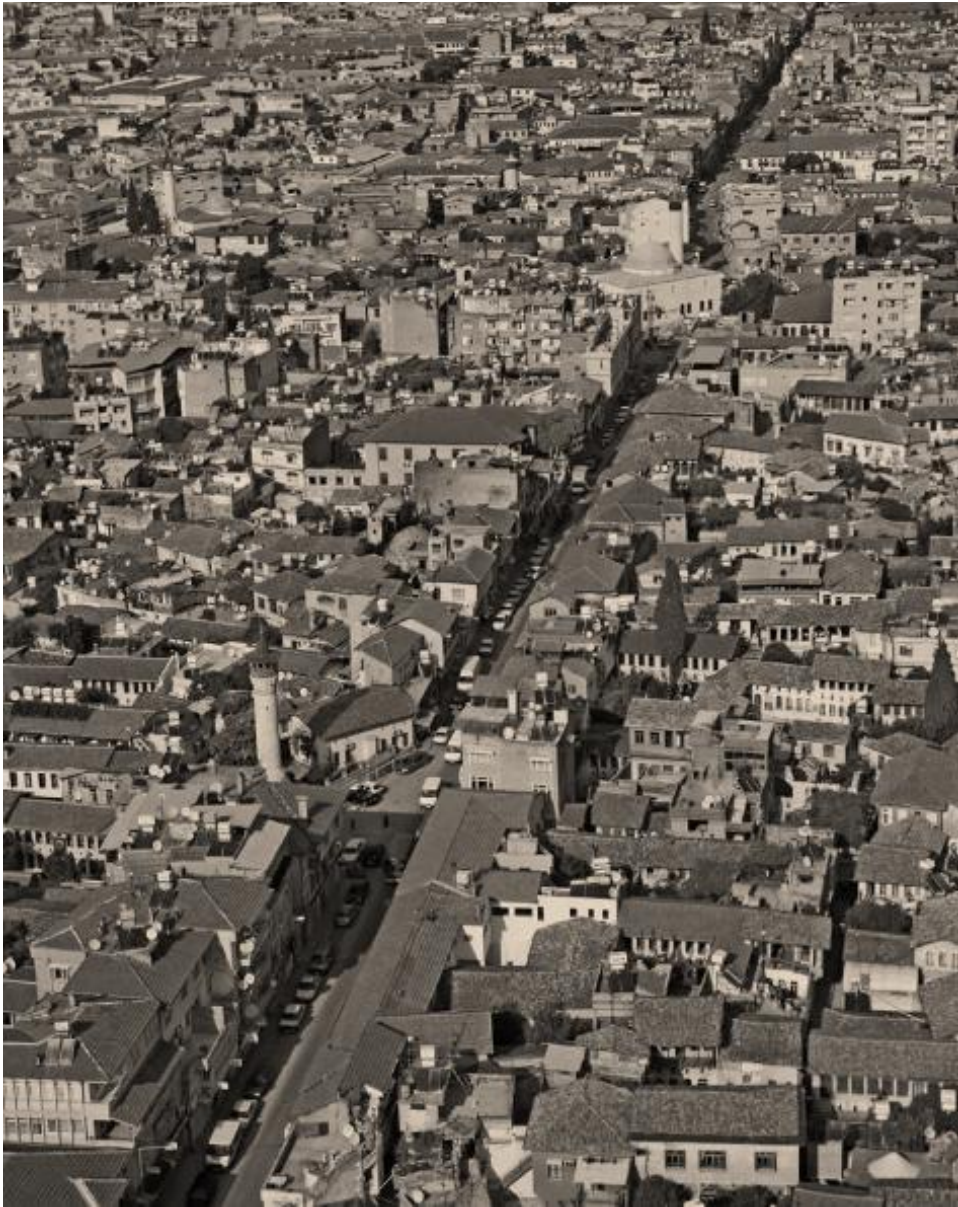
- 1 km
- 0.5
- 0
- HISTORIC CENTER
- CURRENT WATERCOURSE
- 1900S WATERCOURSE
- ANCIENT WATERCOURSE
- HISTORIC DRAINAGE
- FLOOD RISK AREA
- HIGH FLOOD RISK AREA









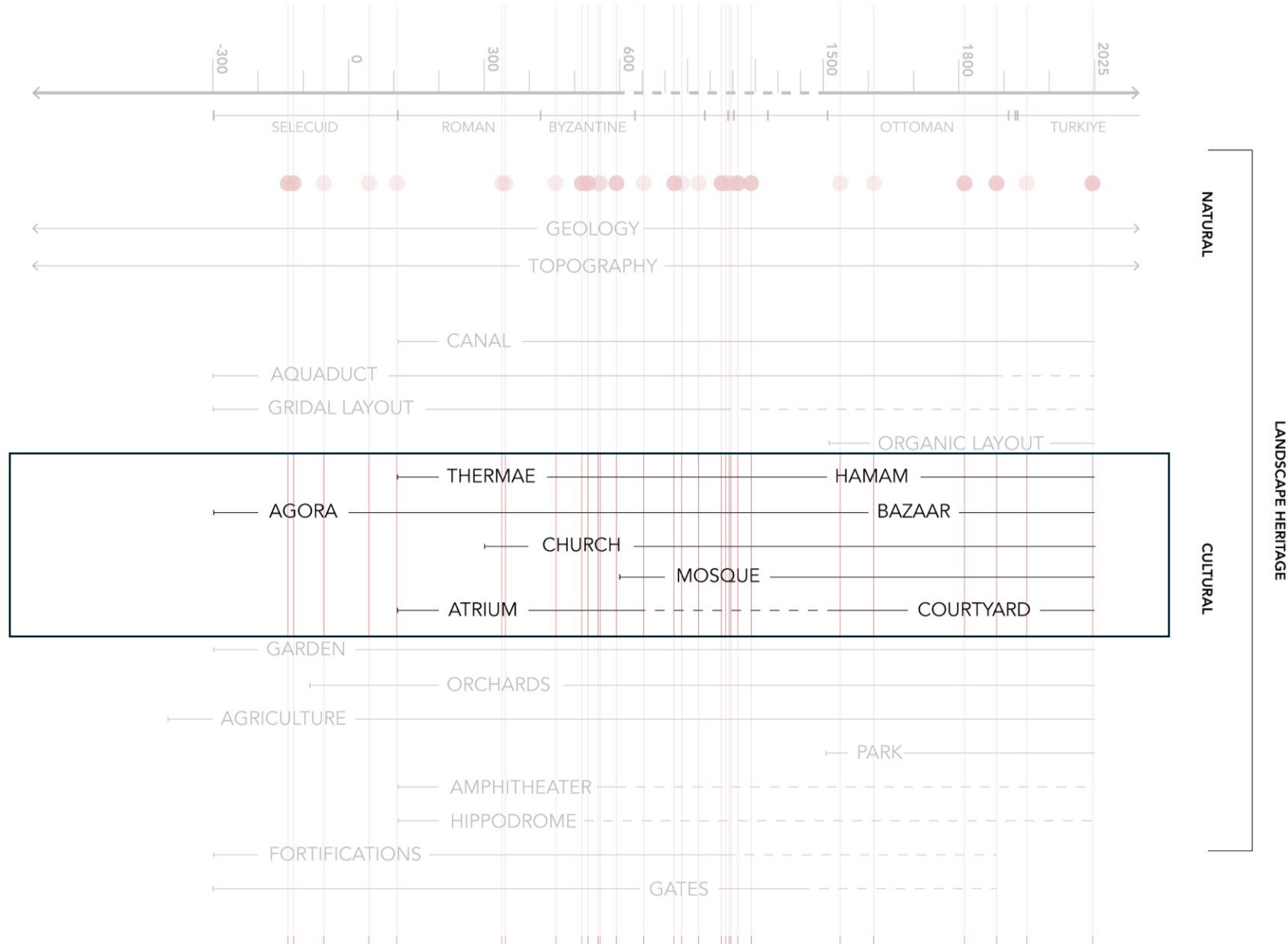


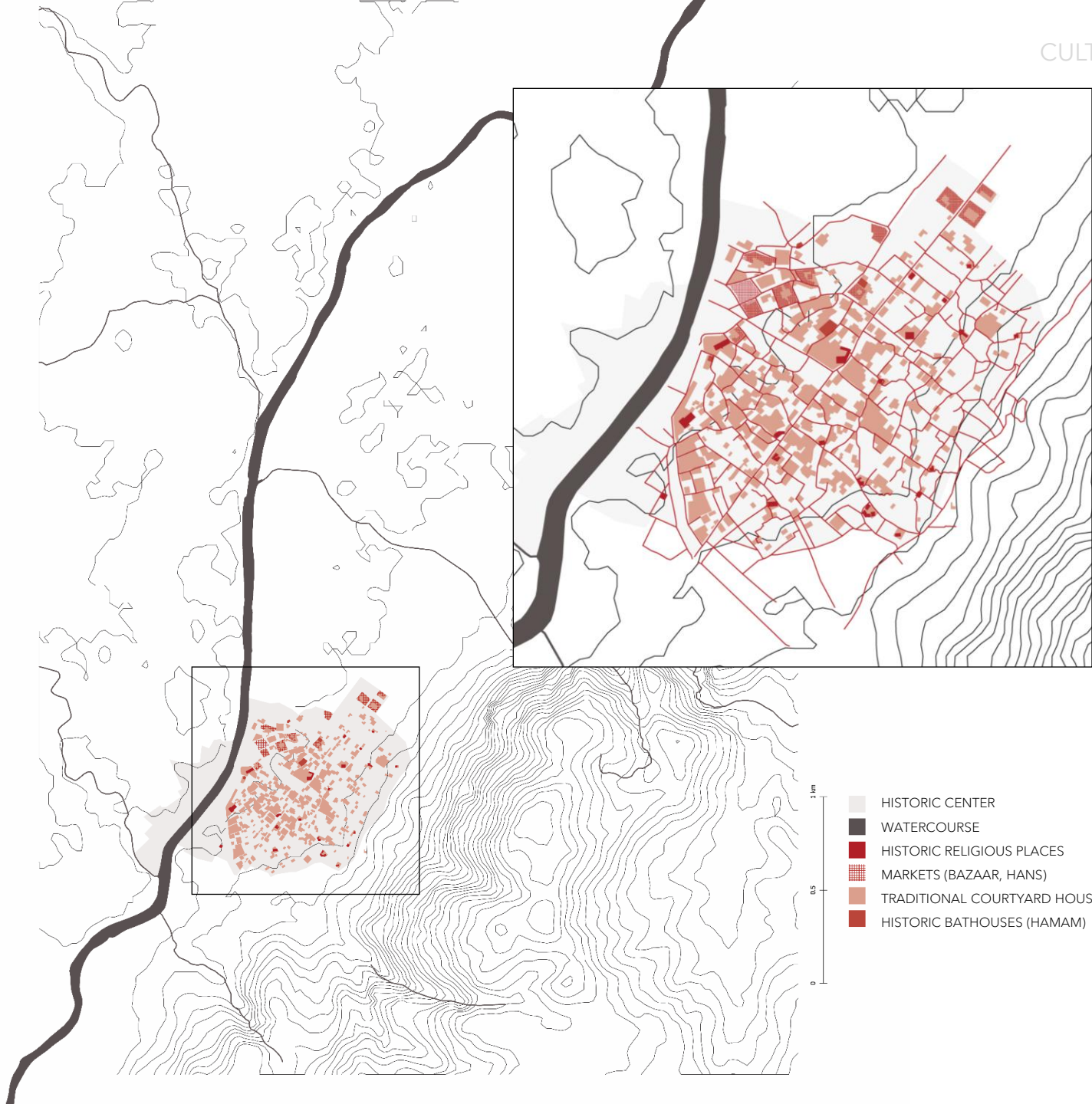














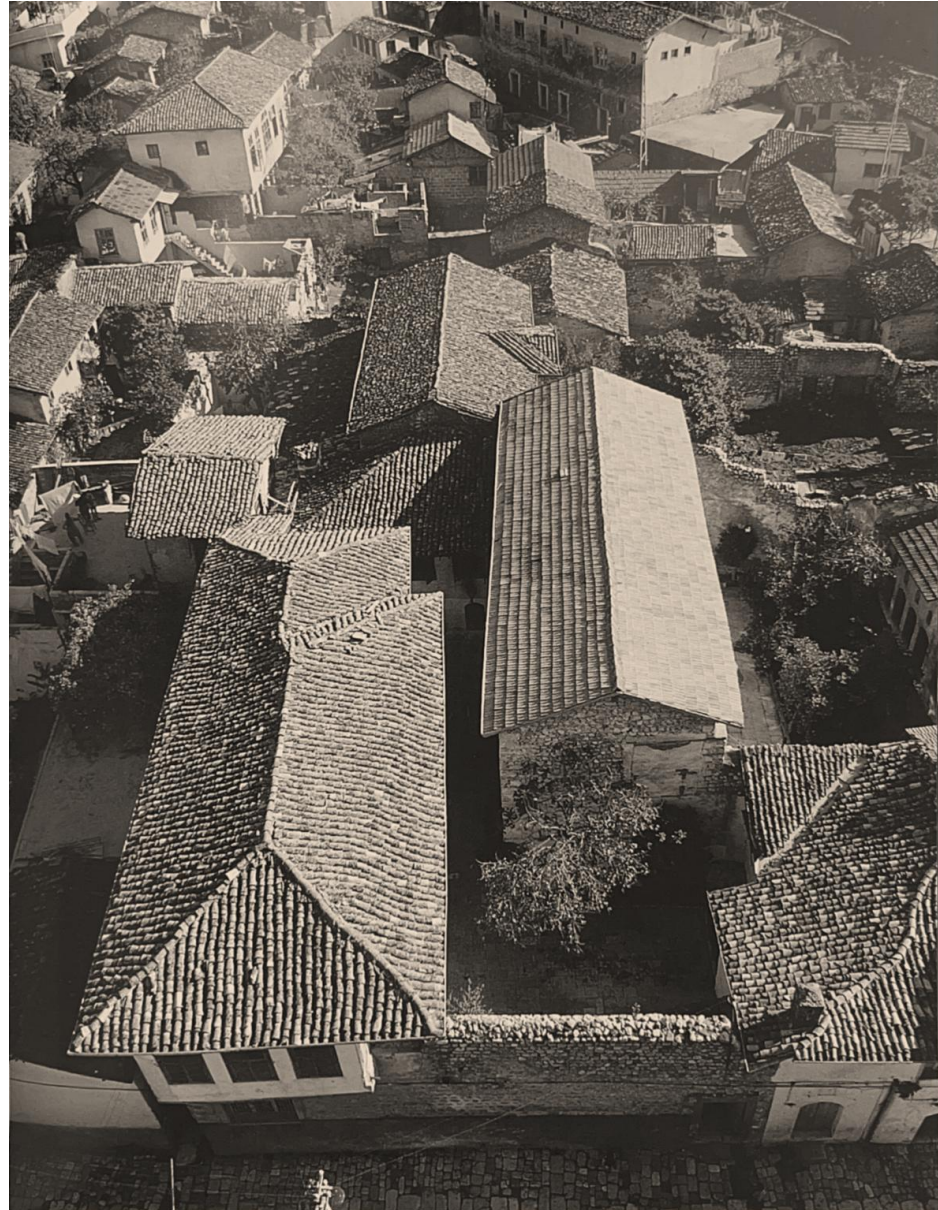








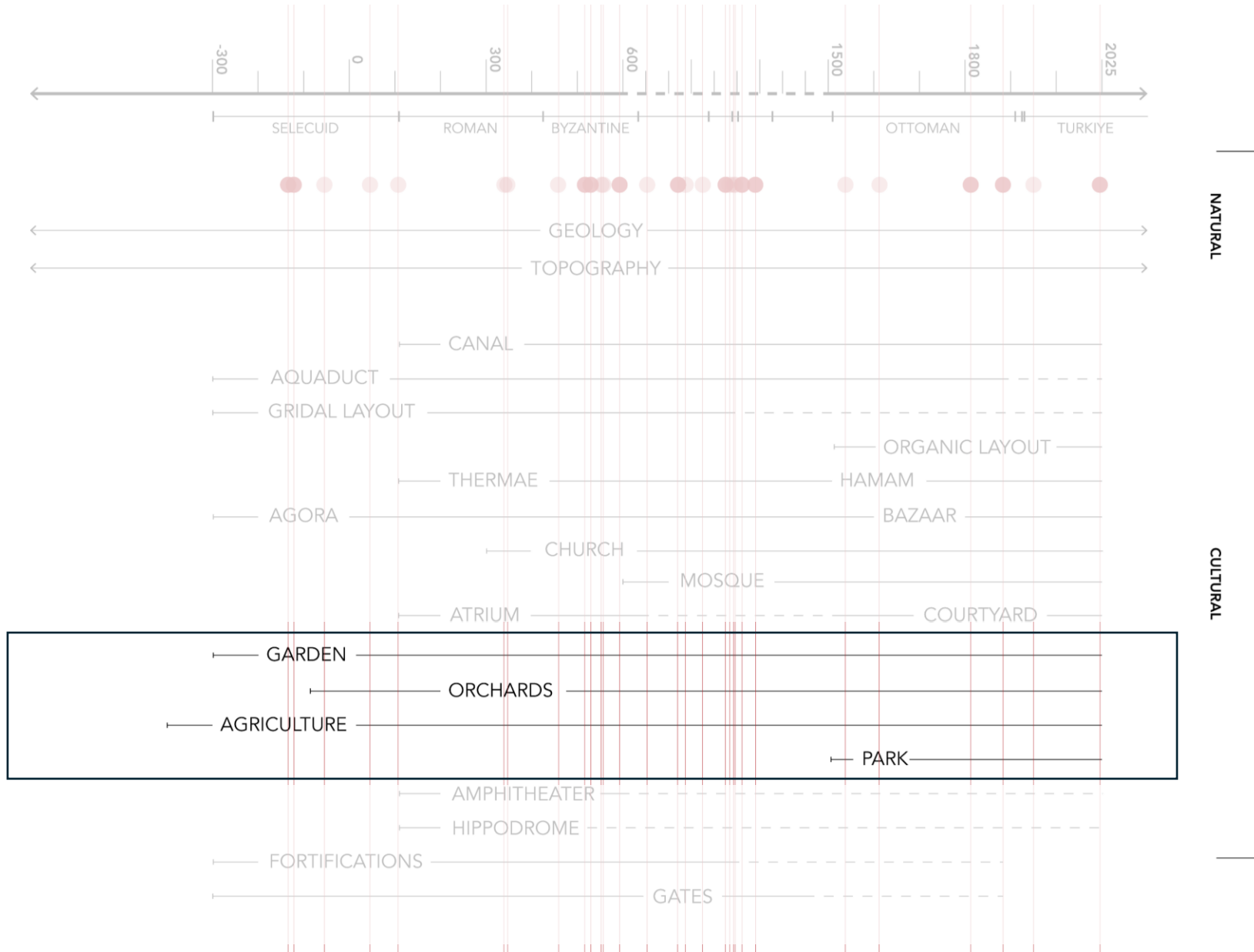


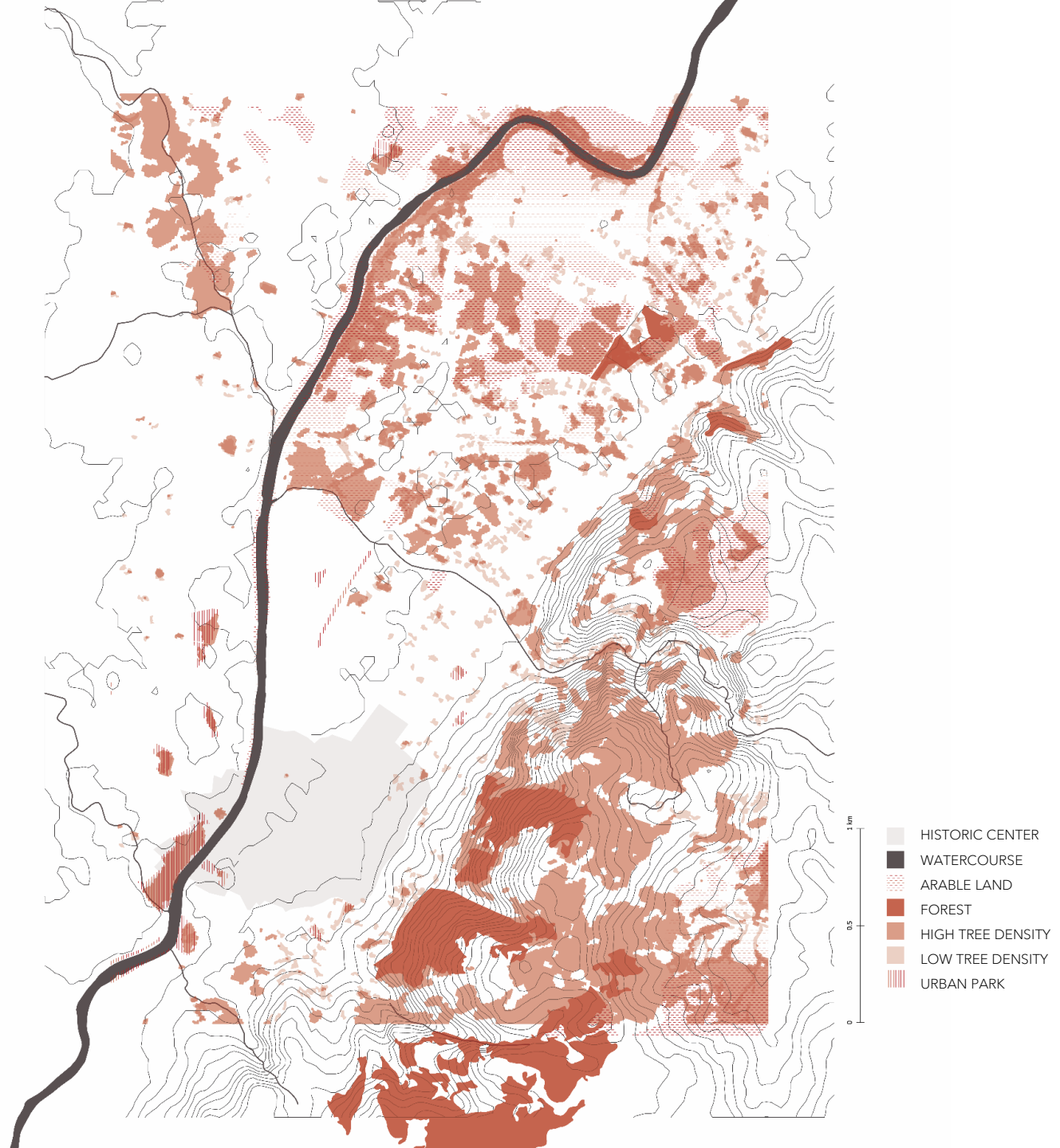






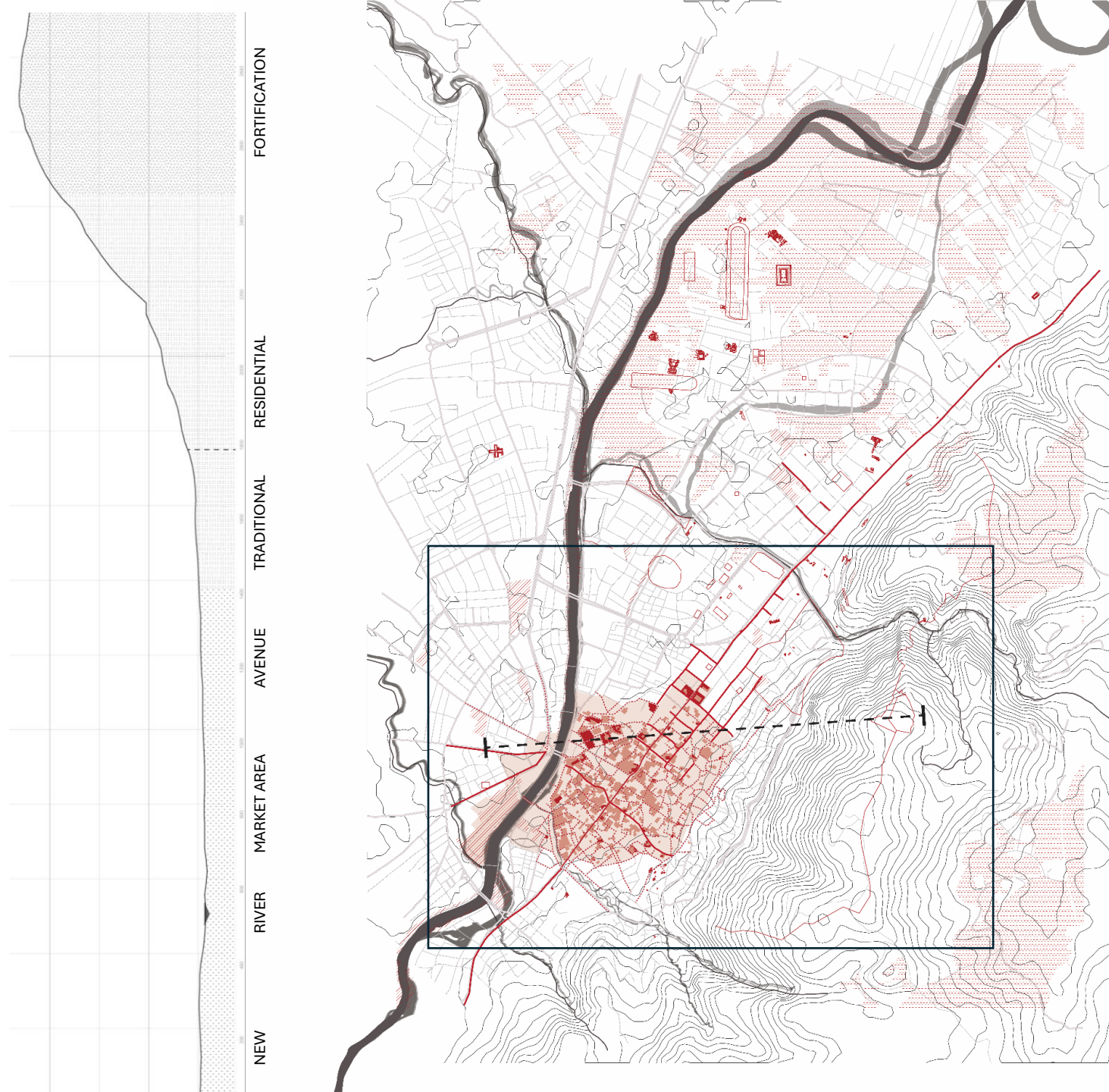






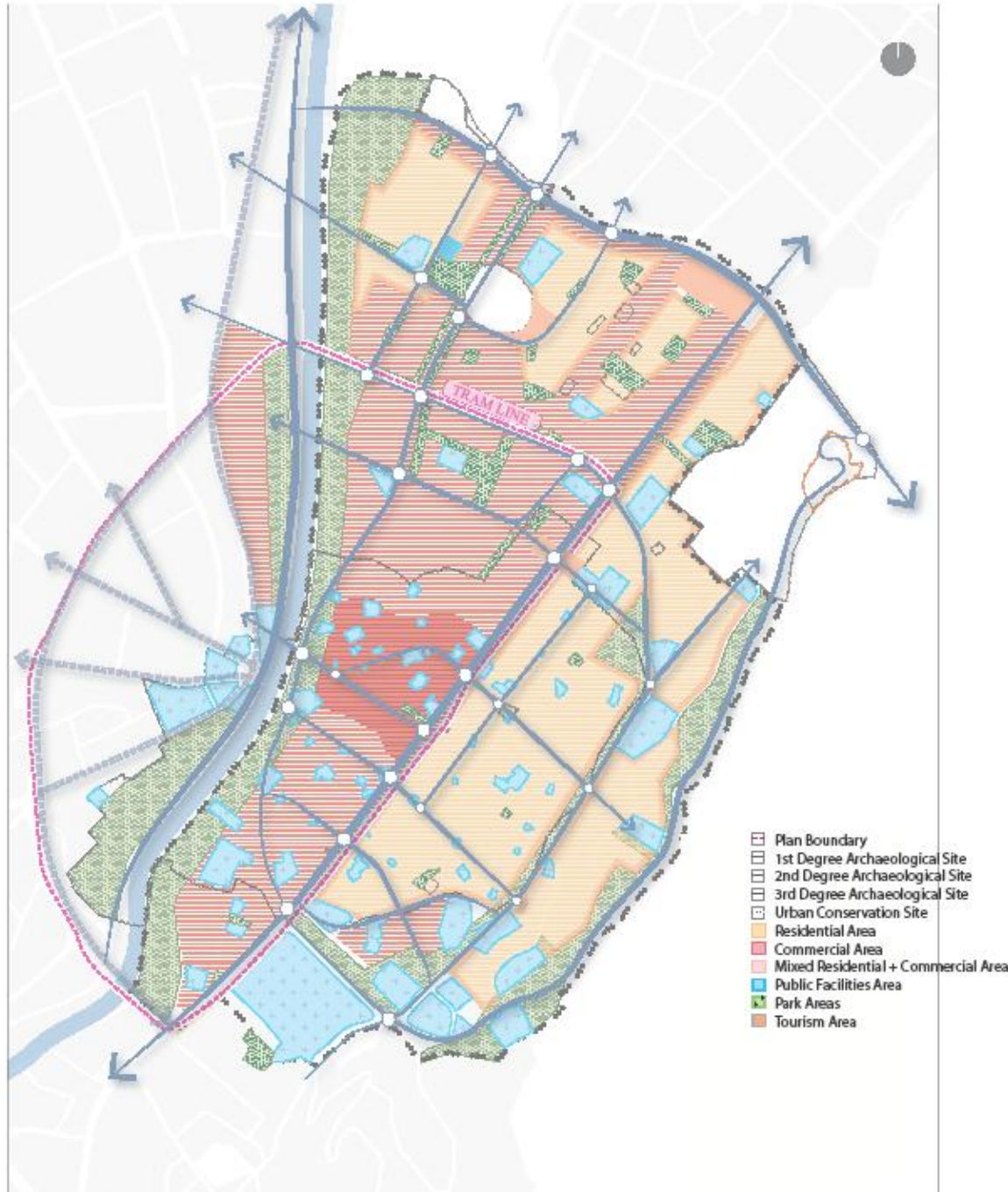






- HISTORIC CENTER
- WATER TRACE FROM ROMAN ERA
- WATER TRACE AROUND 1930
- WATER TRACE OF TODAY
- TRADITIONAL HOUSES
- PUBLIC SPACES
- ARABLE LAND
- PARKS
- ARCHEOLOGICAL SITE
- HISTORIC STREETS



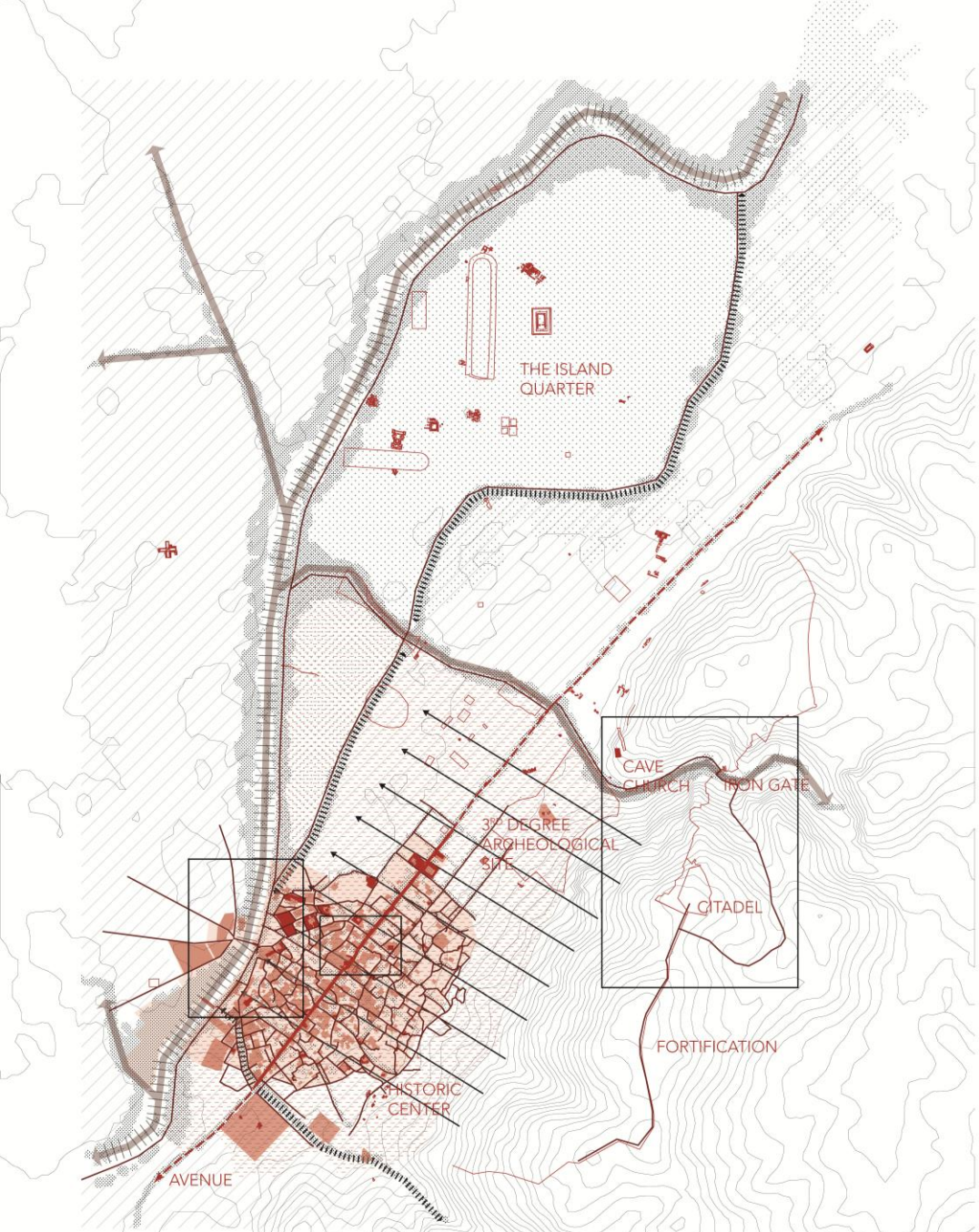


Preservation-Focused Revision Implementation Zoning Plan
(Turkish Design Foundation, 2024):

Promotes **compact neighborhoods, renewable energy,** and **special project zones** for urban recovery.

Emphasizes **zoning regularity** and **uniform typologies**, overlooking Antakya's **organic, layered morphology**.

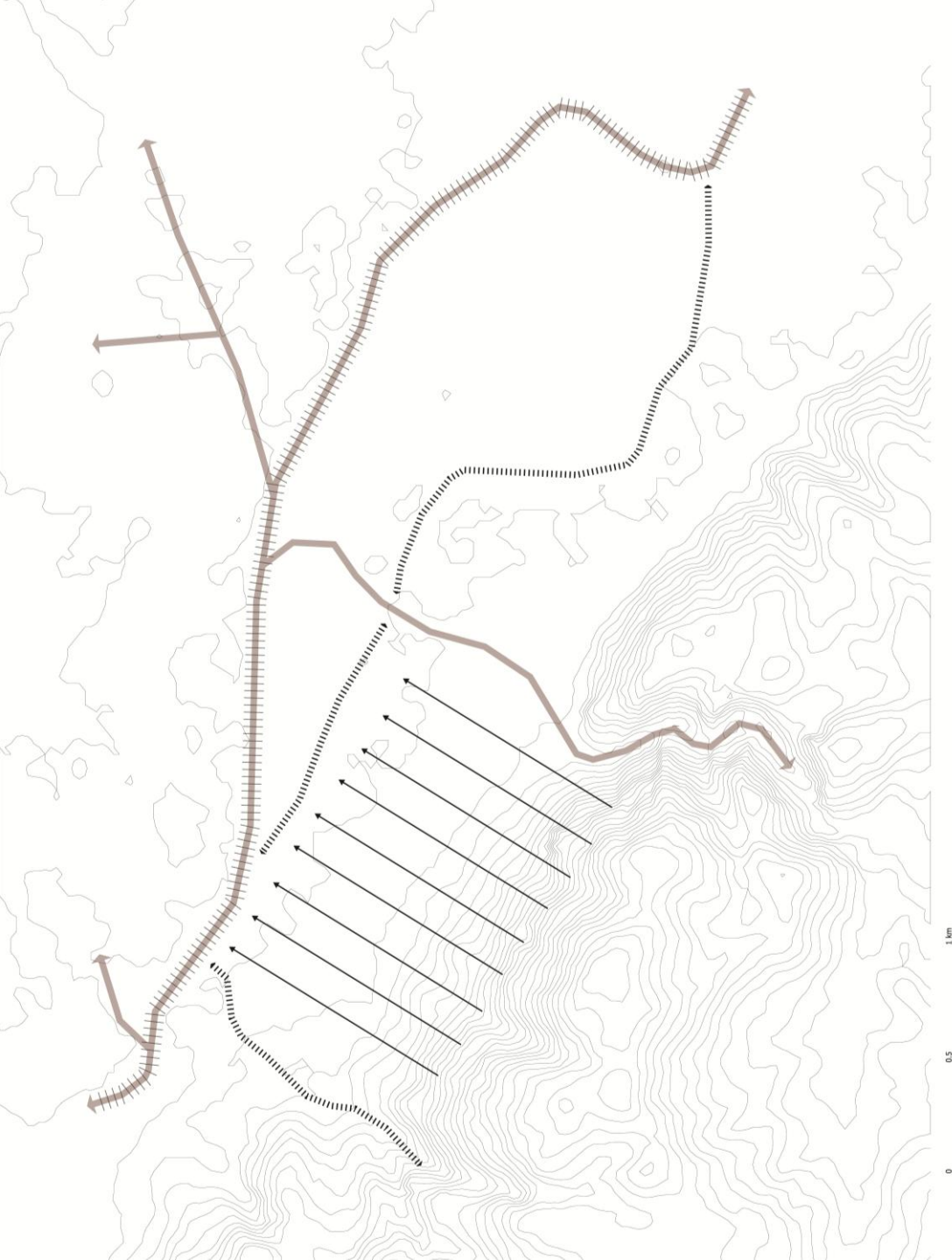
Top-down redevelopment risks erasing social and spatial memory.







- WATERCOURSE REVITALIZATION
- RIVERBED EXPANSION
- NEW SEASONAL STREAM
- STORMWATER MANAGEMENT RENEWAL
- HISTORIC CENTER DEVELOPMENT
- ARCHEOLOGICAL RESEARCH ZONE
- ARCHEOLOGICAL RESTORATION
- CULTURAL ROUTE
- RENEWAL OF THE AVENUE
- PEDESTRIANIZATION
- RESTORATION OF HISTORICAL SPACES
- TRADITIONAL PARCEL CONSERVATION
- RESILIENT URBAN DEVELOPMENT ZONE
- AGRICULTURAL ZONE
- BUFFER ZONE & URBAN GREEN NETWORK

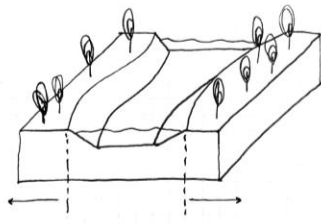
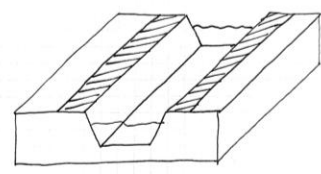


REINCARNATION OF THE STORIES

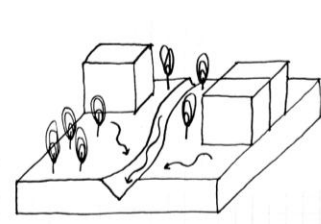
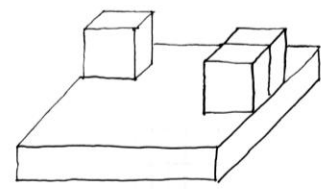


-  WATERCOURSE REVITALIZATION
-  RIVERBED EXPANSION
-  NEW SEASONAL STREAM
-  STORMWATER MANAGEMENT RENEWAL

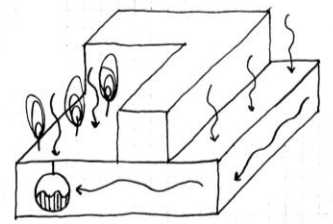
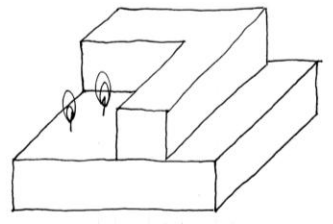
> **WATER NETWORK STRATEGIES**



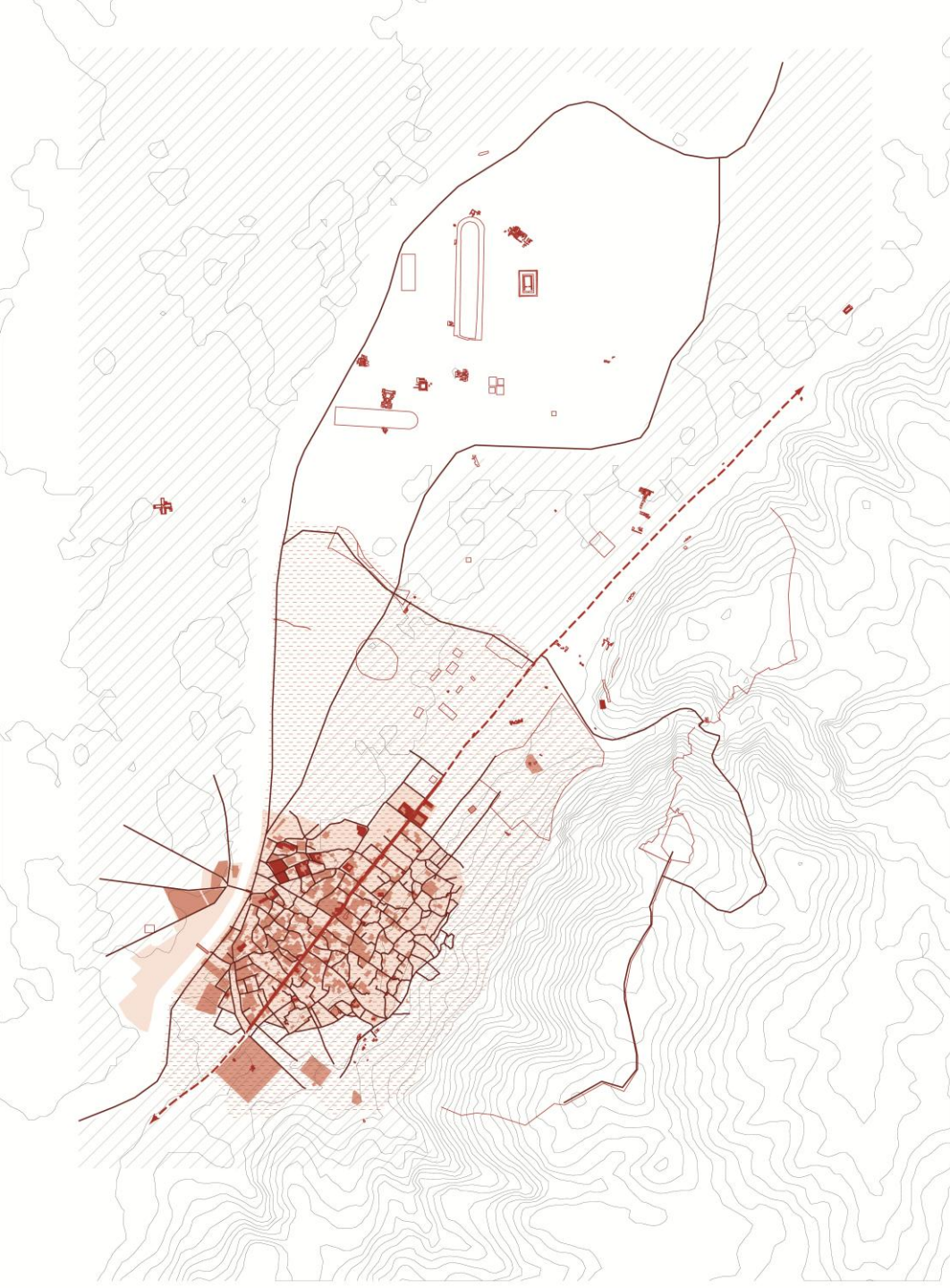
1. Watercourse Revitalization and Riverbed Expansion
The revitalization and controlled expansion of the riverbed aim to restore the ecological balance of the watercourse while increasing its capacity to manage floods and reconnecting the city with its river landscape.



2. New Seasonal Stream
A new seasonal stream introduces a natural water dynamic to the landscape, reviving historical hydrological patterns and enhancing biodiversity.

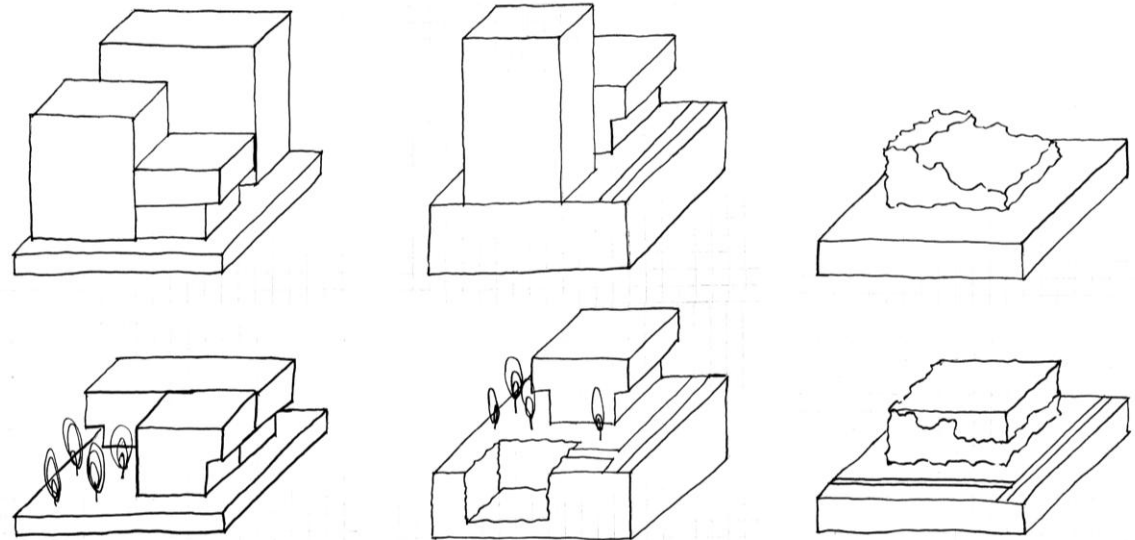


3. Stormwater Management Renewal
By increasing permeable surfaces, renewing drainage systems, and reintroducing cisterns and garden-based water collection, this strategy promotes sustainable water circulation and mitigates flood risks.



- HISTORIC CENTER DEVELOPMENT
- ARCHEOLOGICAL RESEARCH ZONE
- ARCHEOLOGICAL RESTORATION
- CULTURAL ROUTE
- RENEWAL OF THE AVENUE
- PEDESTRIANIZATION
- RESTORATION OF HISTORICAL SPACES
- TRADITIONAL PARCEL CONSERVATION
- RESILIENT URBAN DEVELOPMENT ZONE

> **URBAN AND CULTURAL NETWORK STRATEGIES**

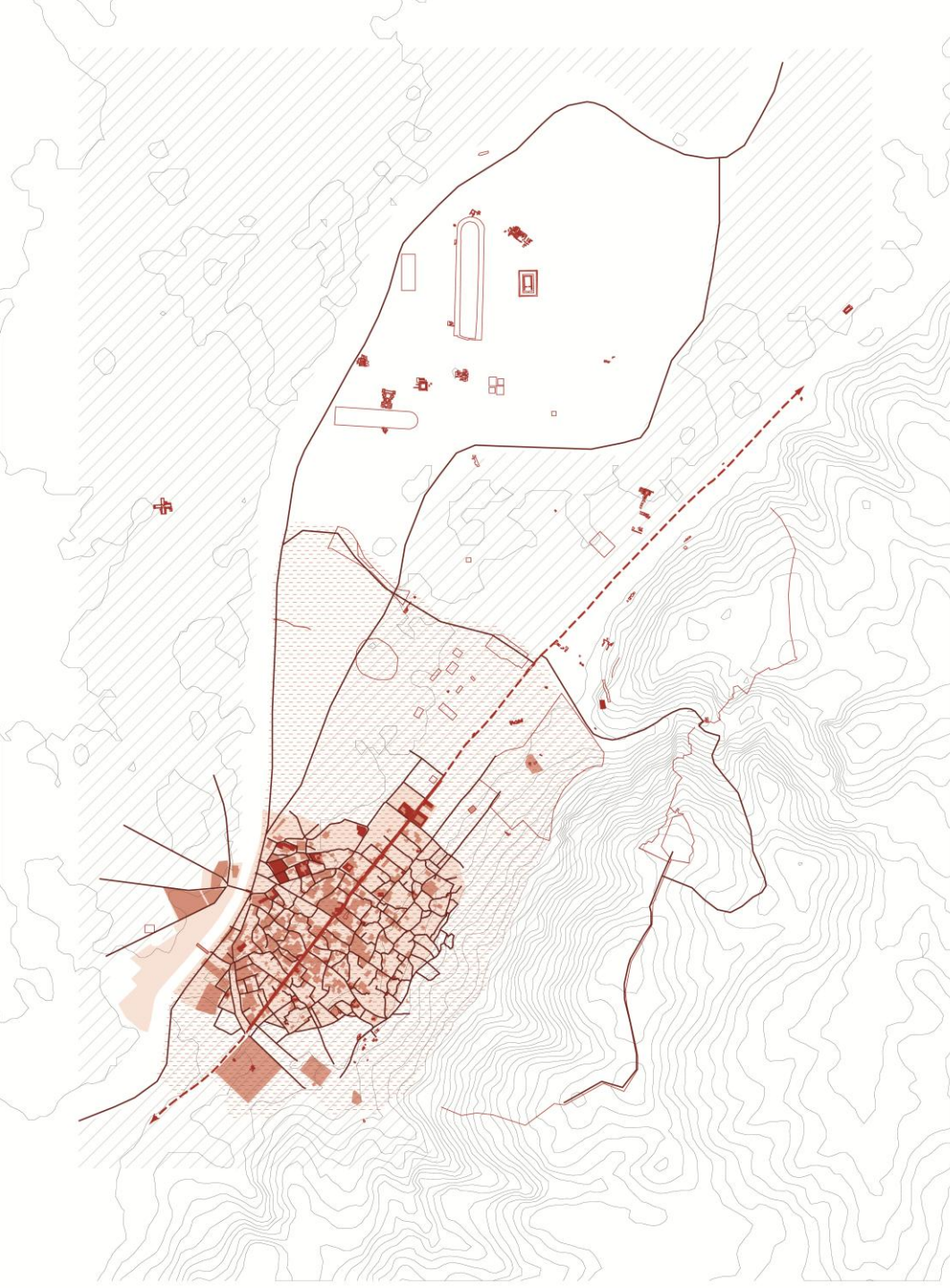


4. Historic Center Development
Sensitive infill development and façade restoration in the historic center aim to maintain the architectural identity while enhancing open spaces for climate resilience and disaster safety.

5. Archaeological Research Zone
Designating an archaeological research zone in and around the old city supports the continuation of excavations and cultural palimpsest.

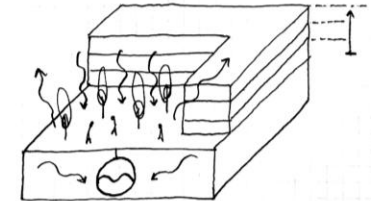
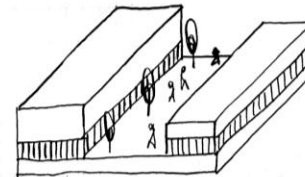
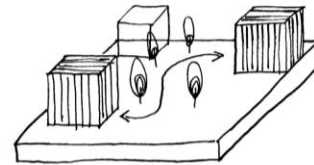
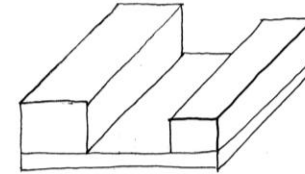
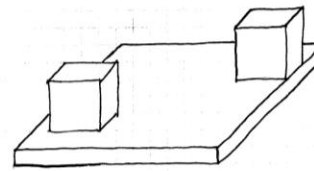
6. Archaeological Restoration
The restoration of uncovered archaeological remains reinforces historical continuity and integrates cultural heritage into the contemporary urban fabric.





-  HISTORIC CENTER DEVELOPMENT
-  ARCHEOLOGICAL RESEARCH ZONE
-  ARCHEOLOGICAL RESTORATION
-  CULTURAL ROUTE
-  RENEWAL OF THE AVENUE
-  PEDESTRIANIZATION
-  RESTORATION OF HISTORICAL SPACES
-  TRADITIONAL PARCEL CONSERVATION
-  RESILIENT URBAN DEVELOPMENT ZONE

> **URBAN AND CULTURAL NETWORK STRATEGIES**



7. Cultural Route and Traditional Parcel Conservation and Restoration of Historical Spaces

Connecting significant cultural nodes through walkable routes ensures the conservation of traditional parcels and the revitalization of historical spaces in everyday urban life.

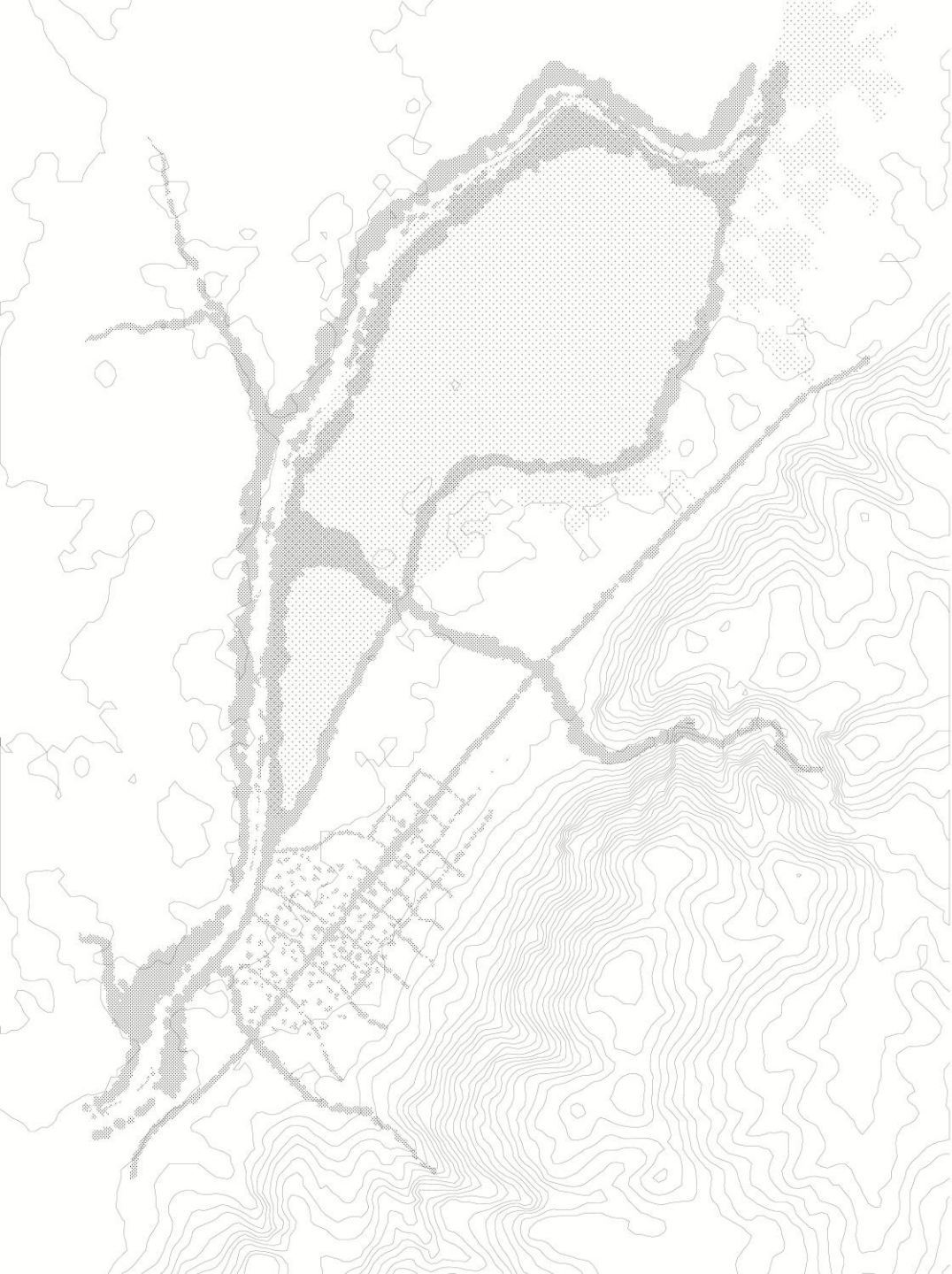
8. Renewal of the Avenue and Pedestrianization



Transforming parts of Kurtuluş Avenue into a pedestrian-friendly zone enhances its resilience against climate and disaster risks while supporting local commerce and public life.

9. Resilient Urban Development Zone

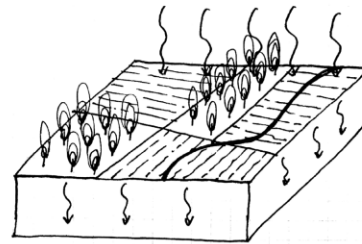
This zone introduces adaptive planning principles to create urban areas resistant to climate change and seismic events, ensuring long-term livability.



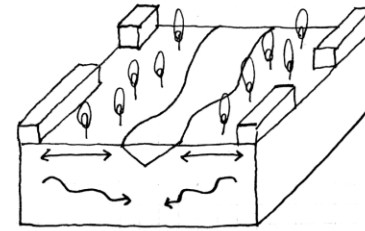


 AGRICULTURAL ZONE
 BUFFER ZONE & URBAN GREEN NETWORK

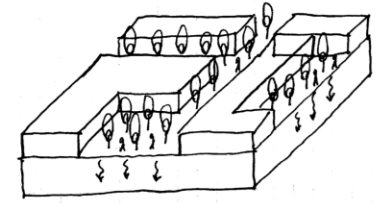
> GREEN NETWORK STRATEGIES



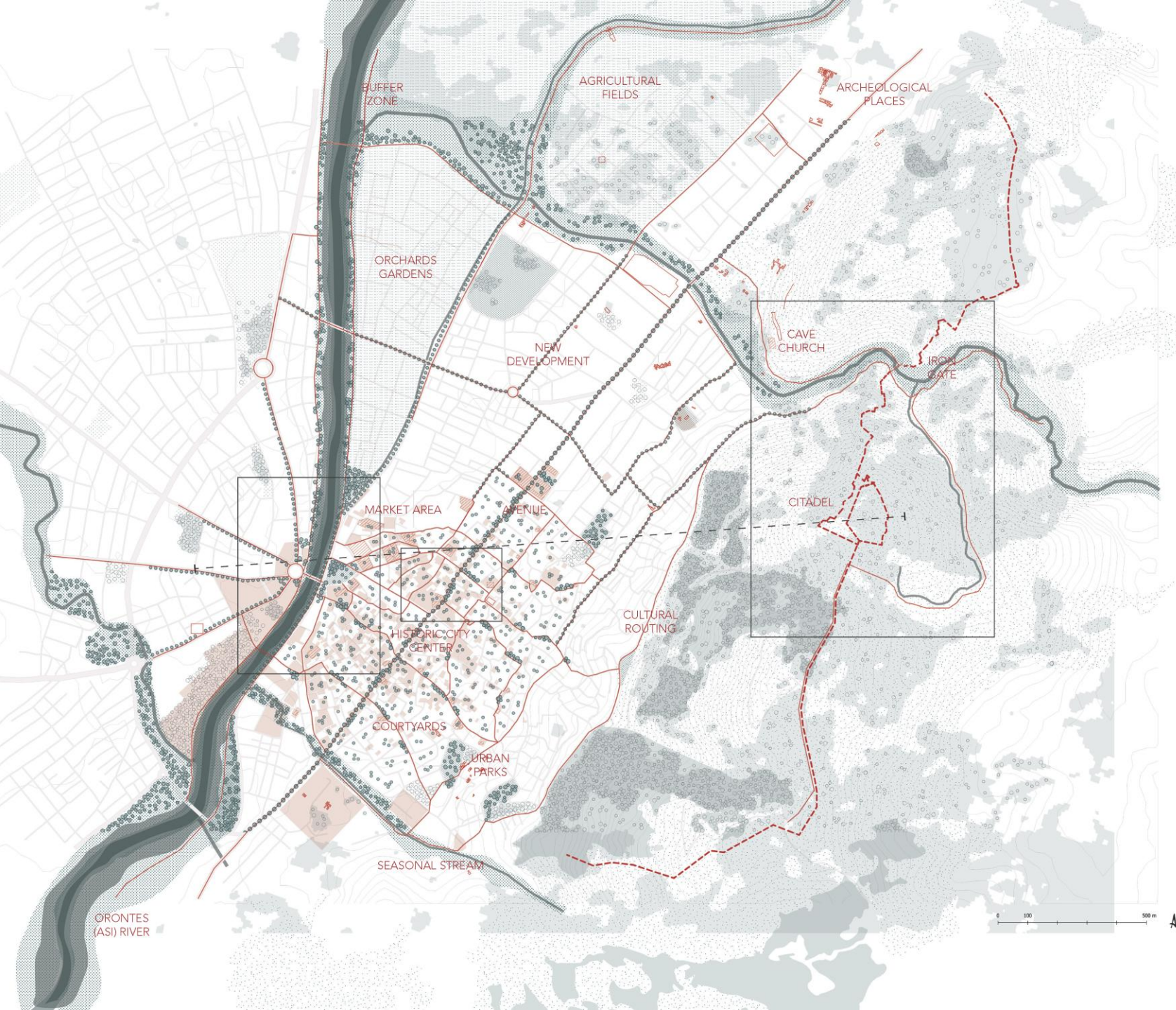
10. Agricultural Zone
 Locating agricultural activities in flood-prone and high-risk areas allows for productive land use while maintaining a natural buffer against disasters.



11. Buffer Zone
 Buffer zones along the river and streams act as ecological filters, preventing flooding, improving water quality, and offering a protective transition between natural and urban areas.



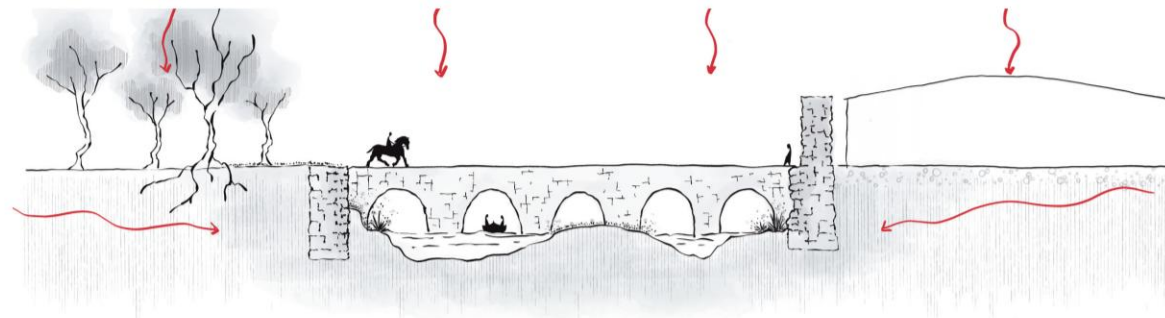
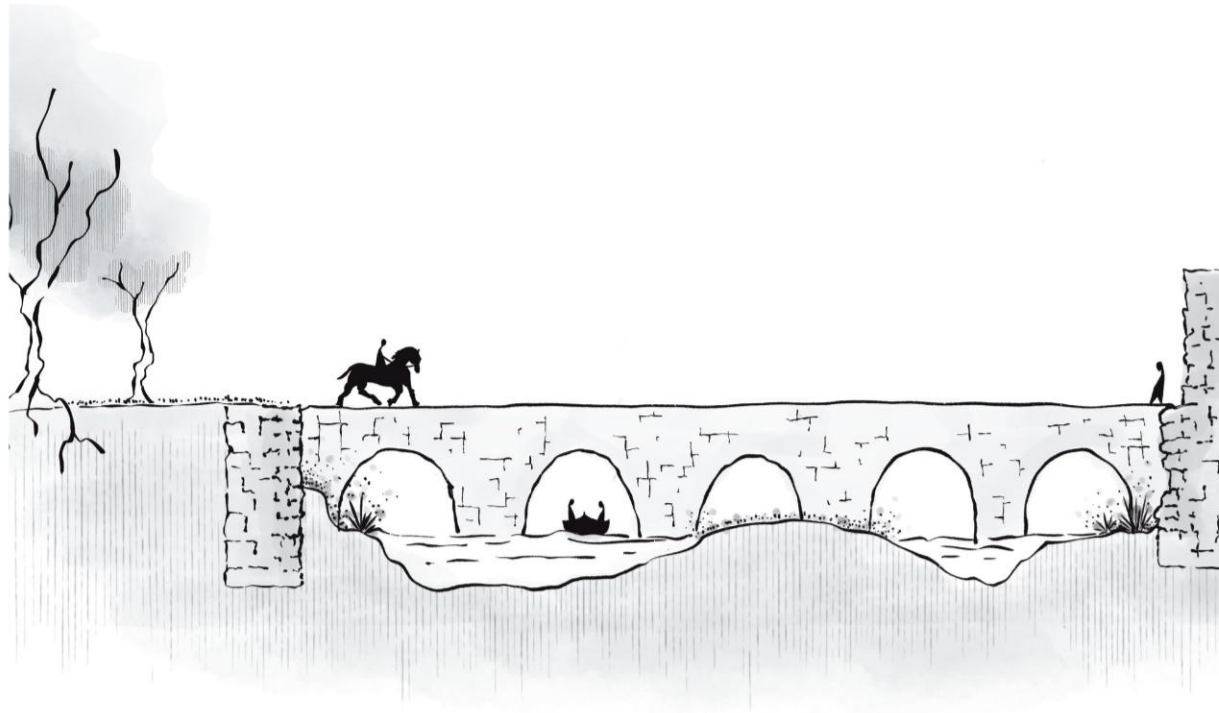
12. Urban Green Network
 An interconnected network of green spaces strengthens ecological continuity, provides accessible open areas, and enhances the city's overall environmental resilience.



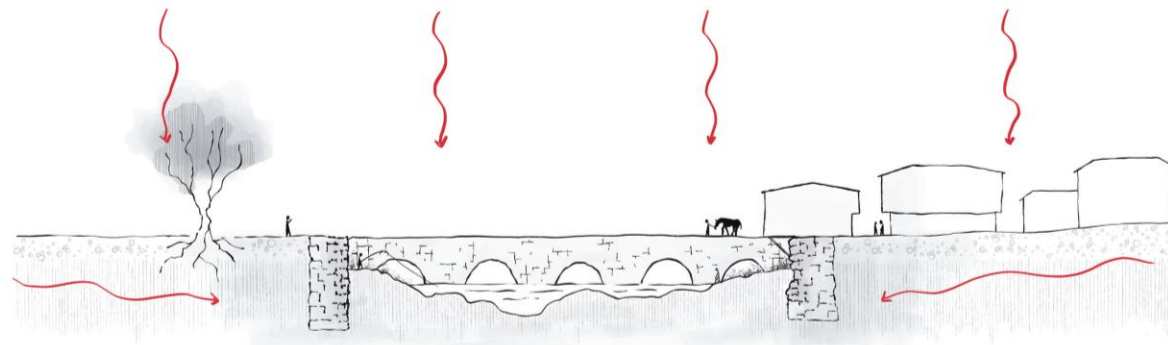
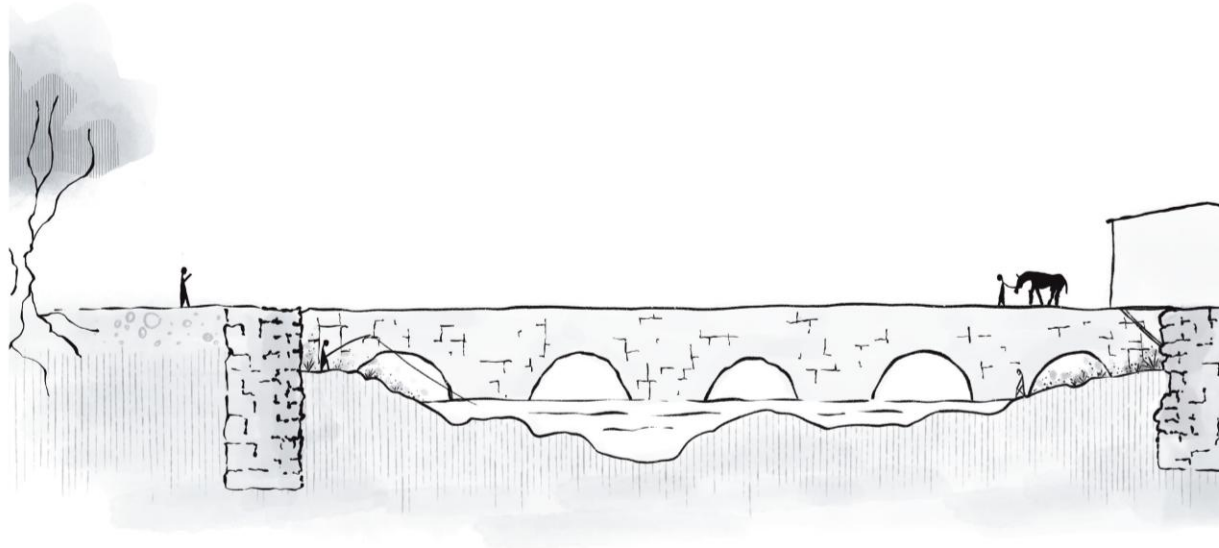
1. Reviving Water Systems
2. Restoring Cultural Features
3. Improving Green Network



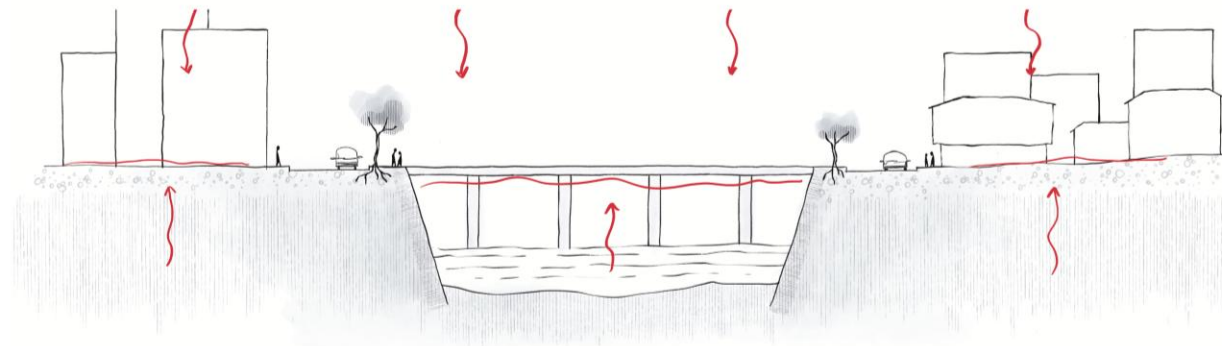
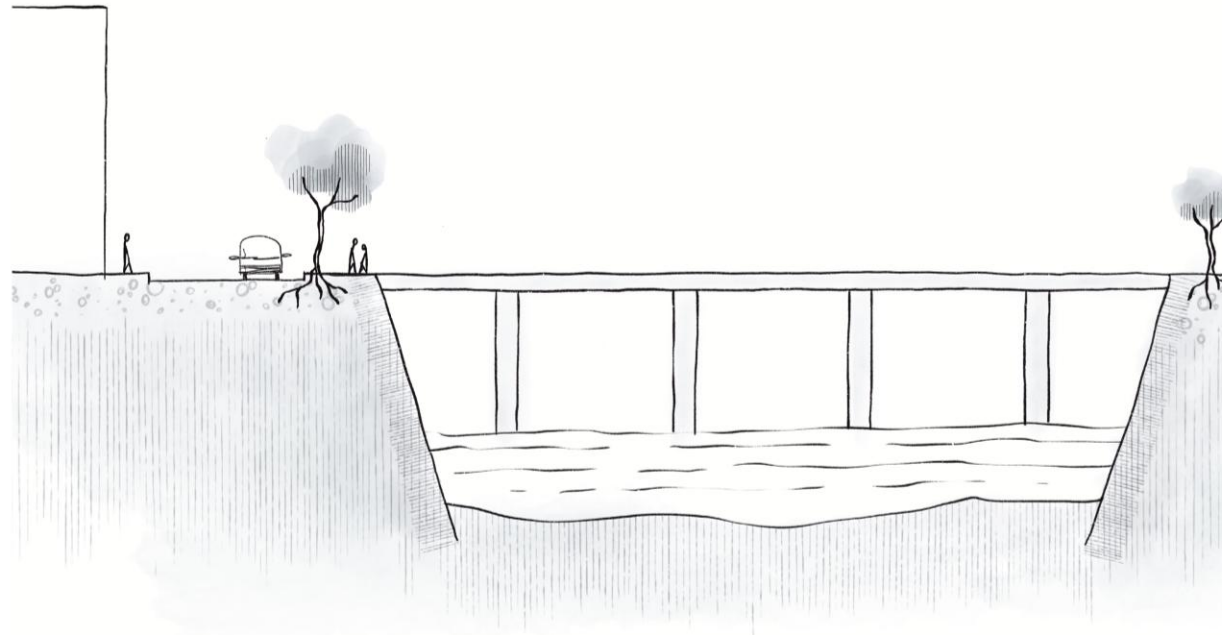
Aerial Photographs of the ASI (ORONTES) River Area, 2018, 2023, 2025



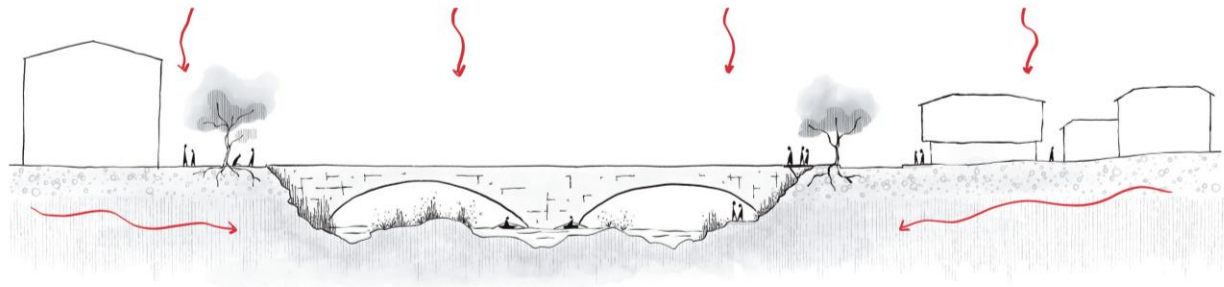
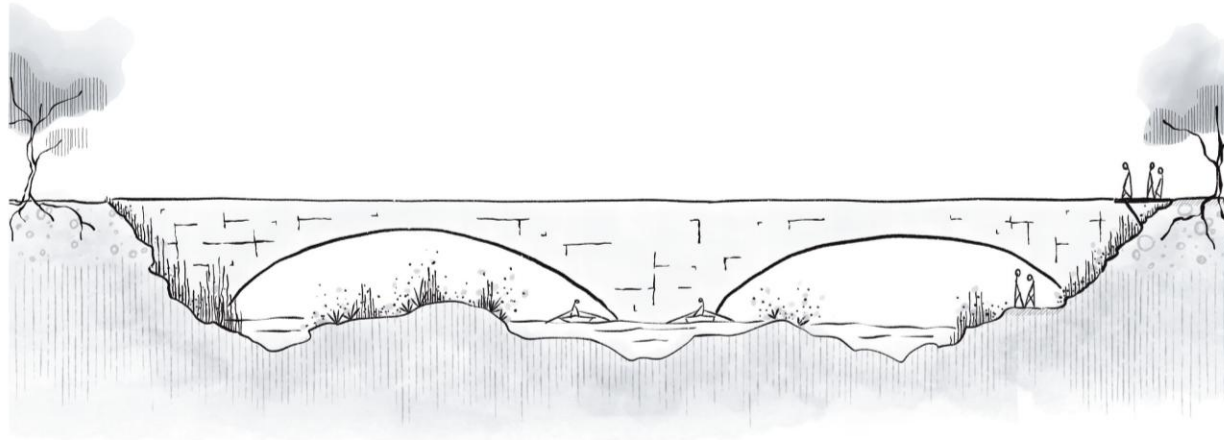
> ASI RIVER ROMAN ERA SECTION



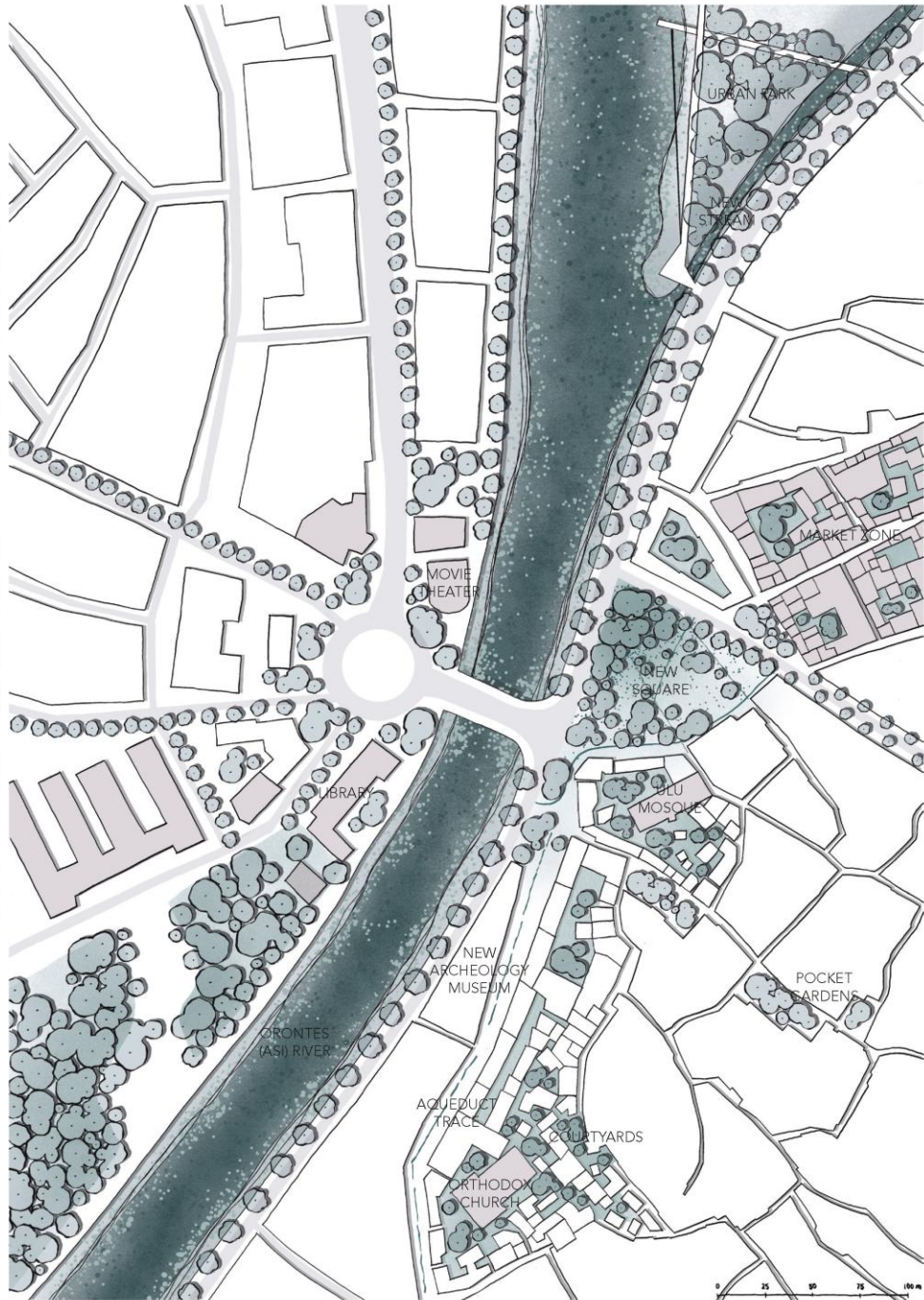
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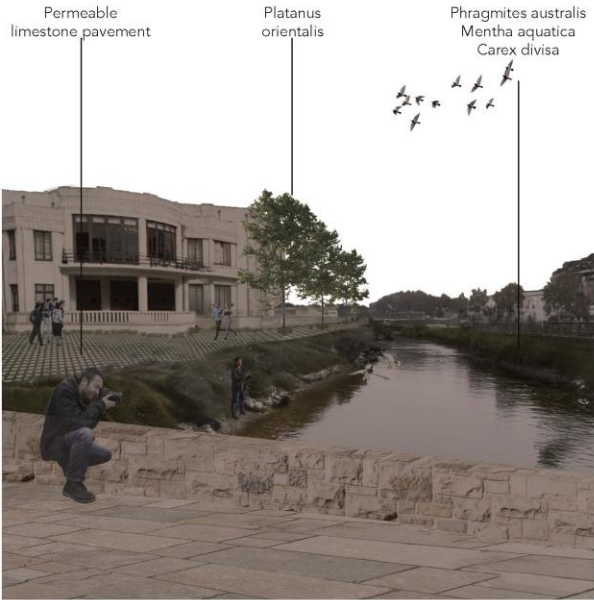
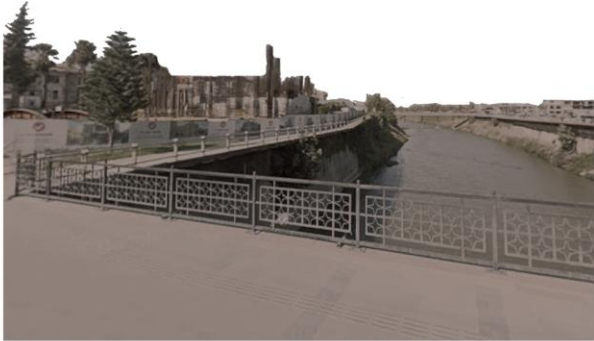
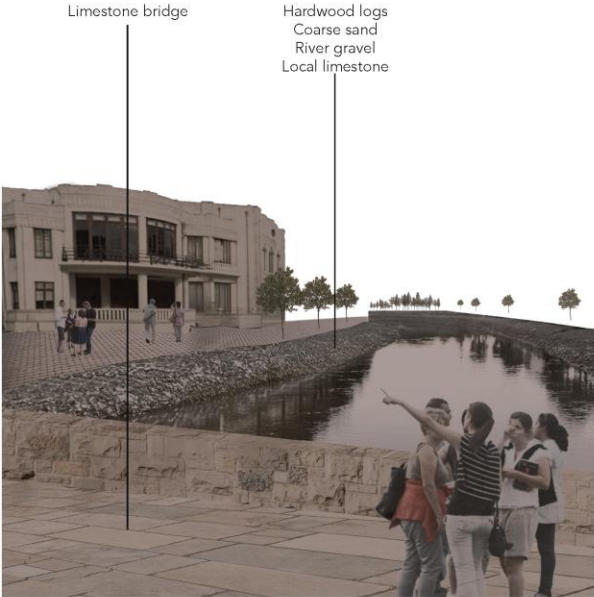


> ASI RIVER MODERN ERA SECTION



> ASI RIVER DESIGN PROPOSAL SECTION

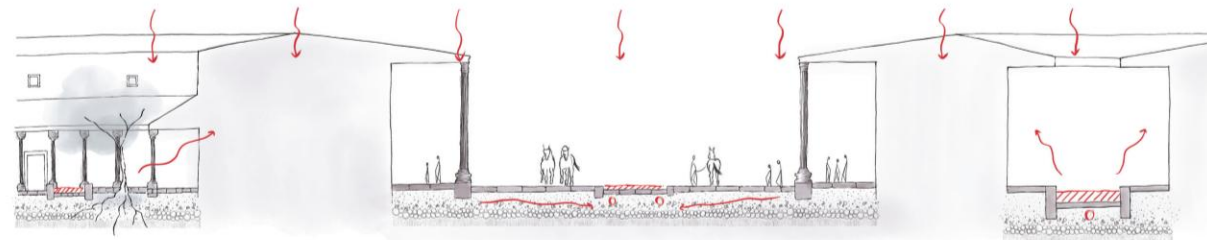
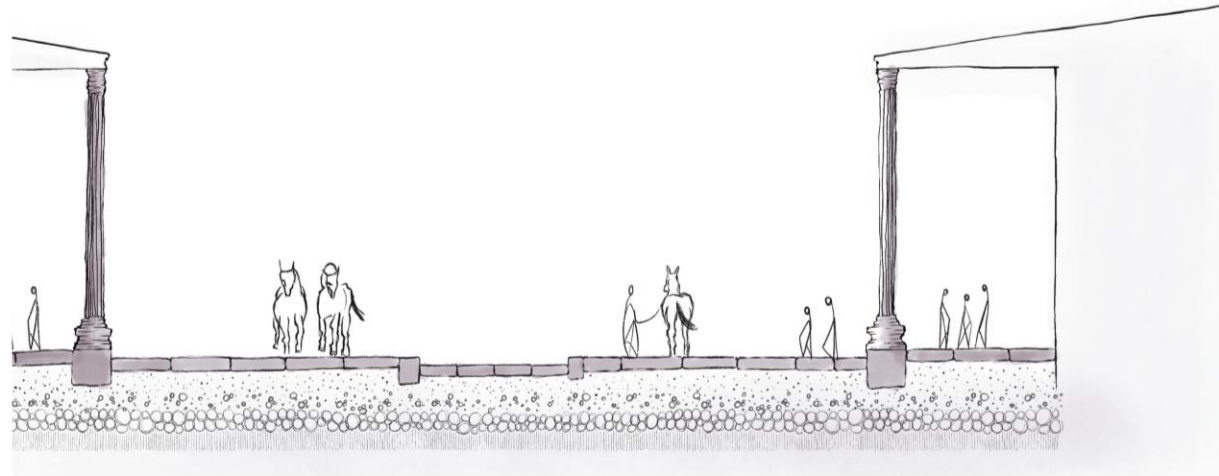




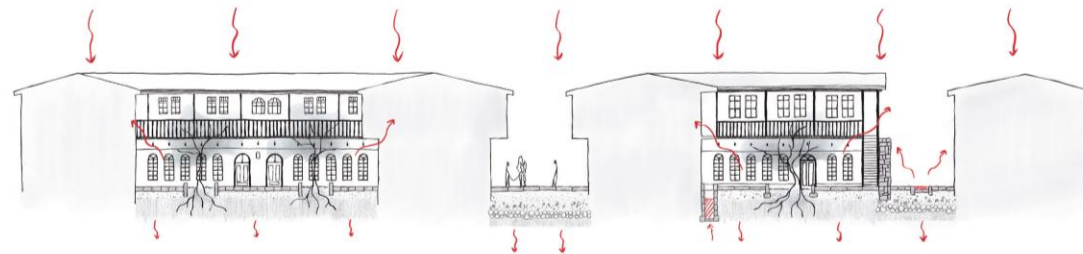
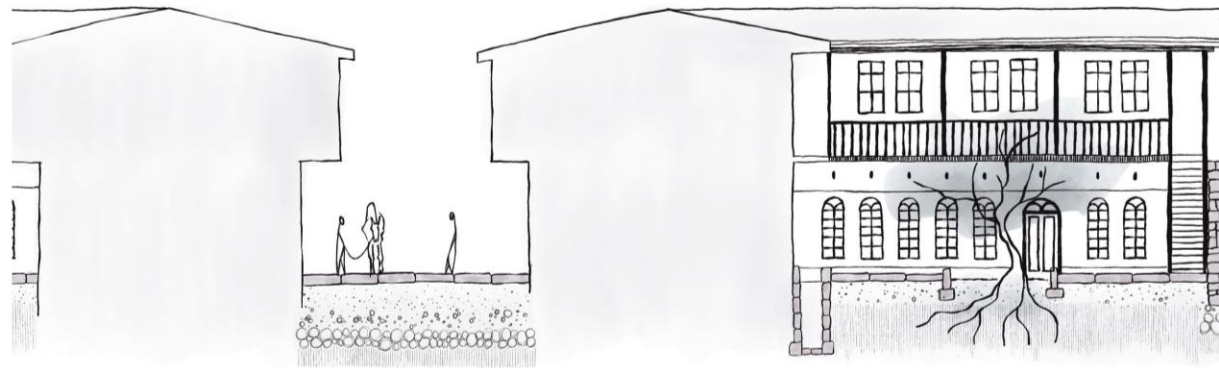




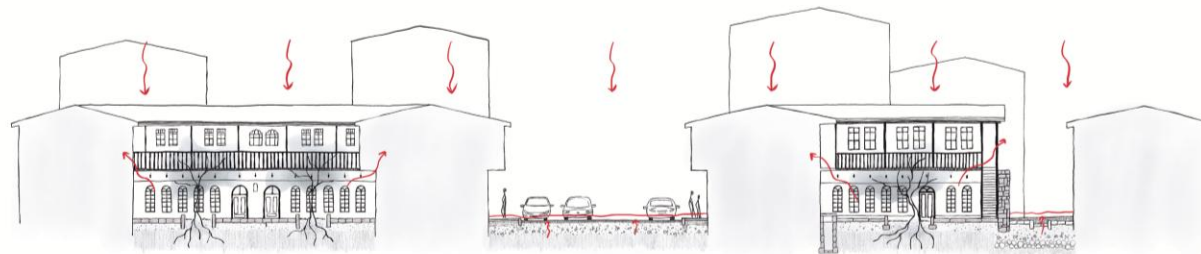
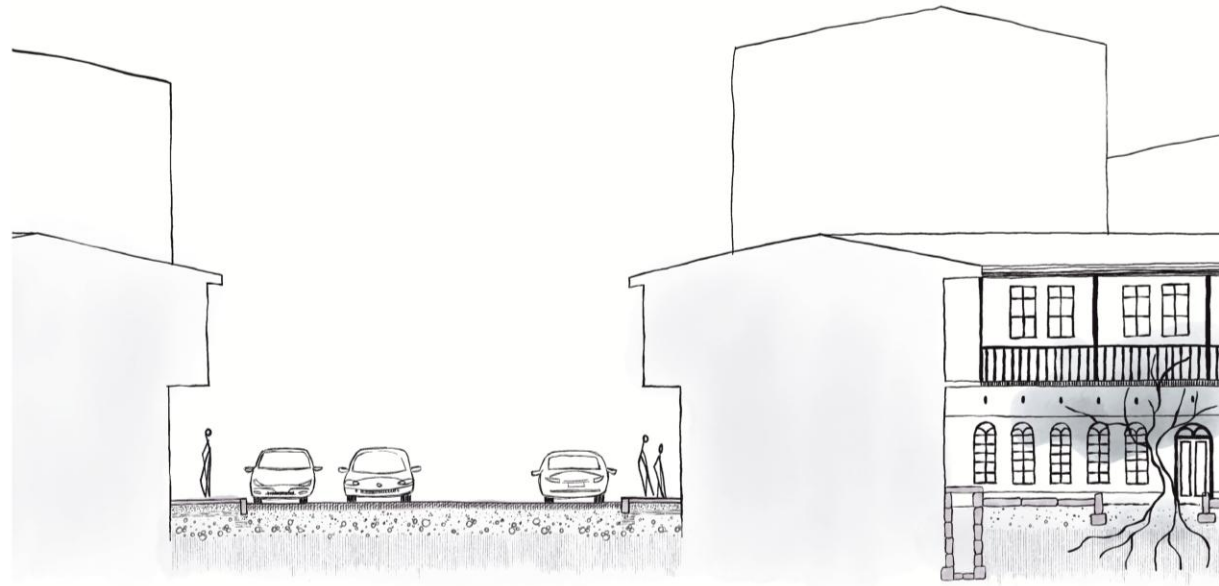
Aerial Photographs of the CITY CENTER, 2018, 2023, 2025



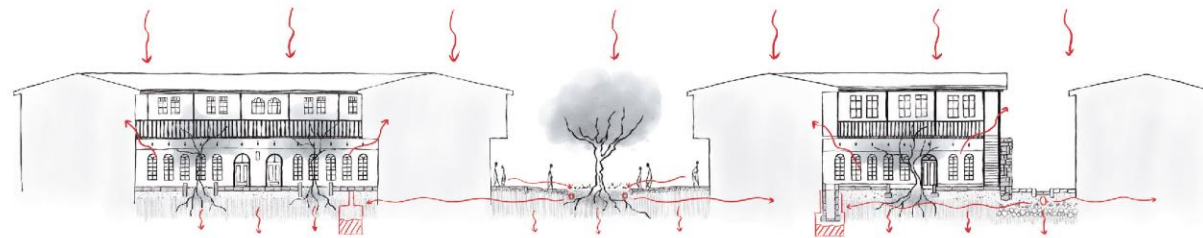
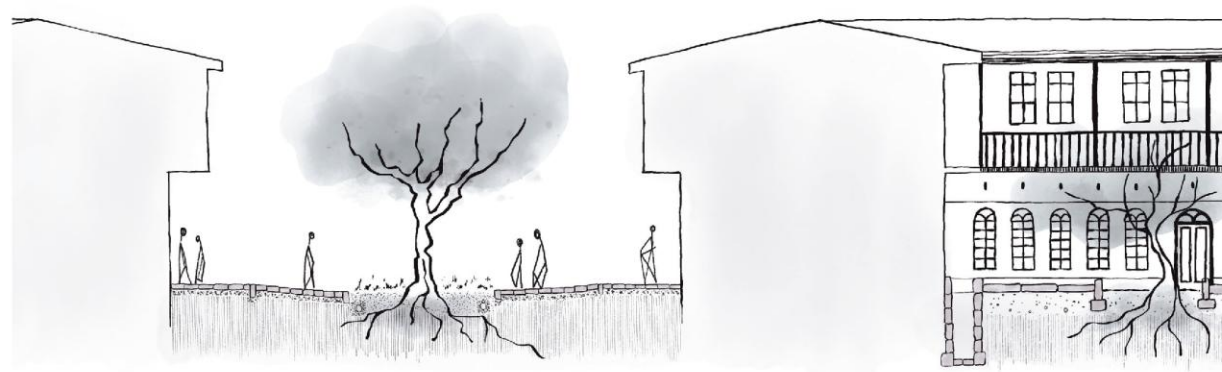
> AVENUE AREA ROMAN ERA SECTION



> AVENUE AREA OTTOMAN ERA SECTION



> AVENUE AREA MODERN ERA SECTION



> AVENUE AREA DESIGN PROPOSAL SECTION







