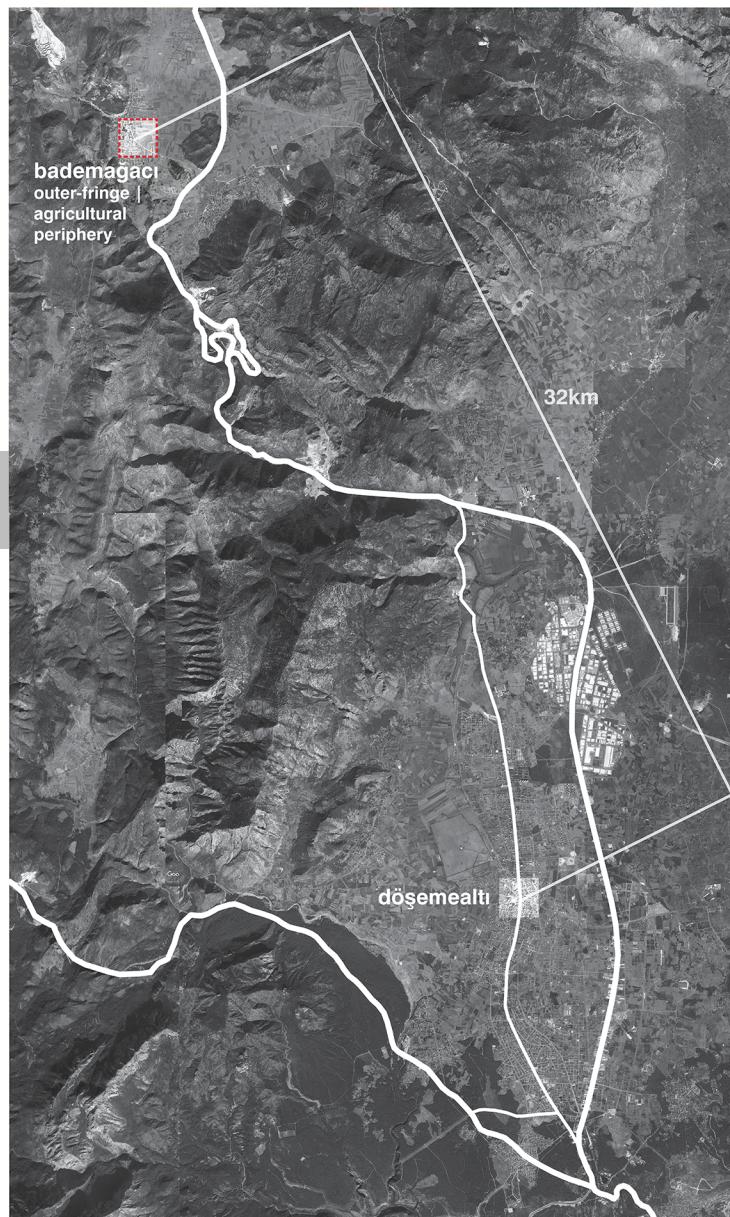


Outer-fringe I Agricultural Periphery:

Bademağacı

Nilay Nida Can | Özge İdali

01. Area Assessment



1.1. Location

Bademağacı, an outer-fringe agricultural periphery of Döşemealtı district, is located to the northwest of Antalya and on the Antalya-Burdur highway. The distance between the center of the village and the center of Döşemealtı is about 32 kilometers. Also, village is the neighbor of Dağbeli.



1.2. Spatial History of The Site



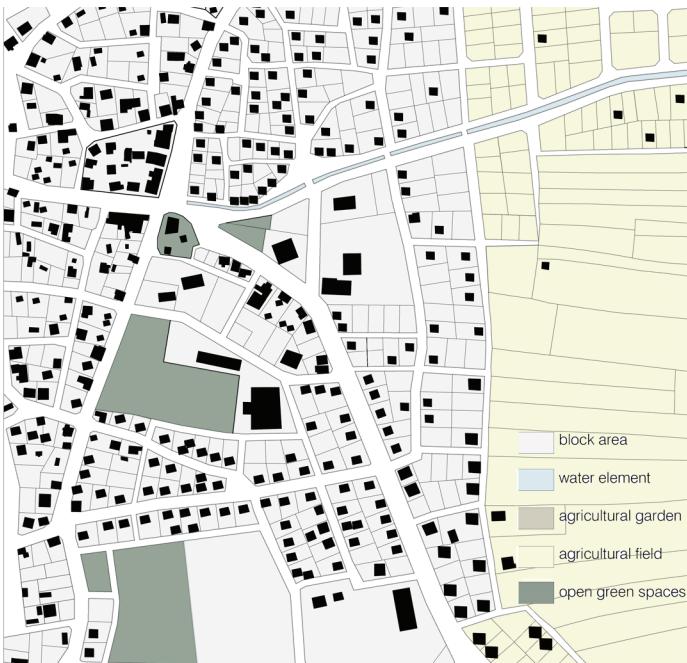
1995: The linear development along Burdur highway, the initial orientation, towards Bademağacı



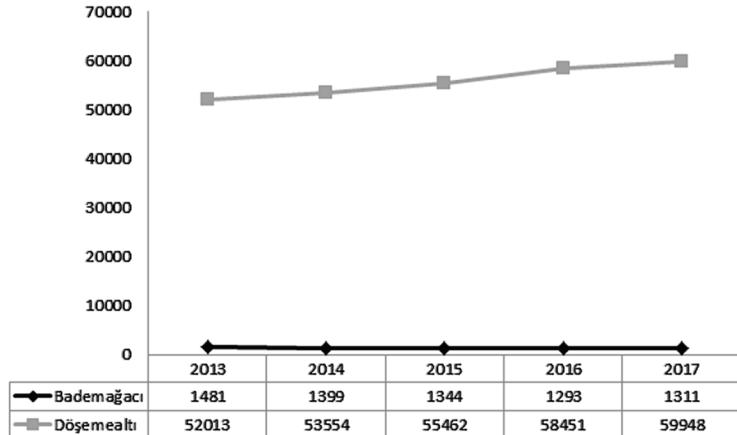
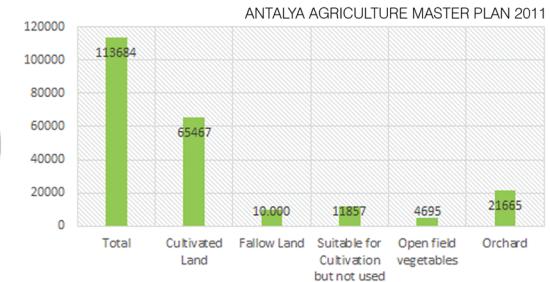
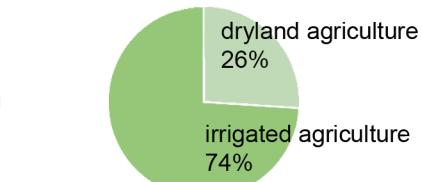
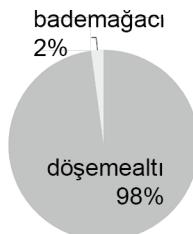
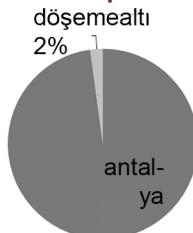
2017: Acceleration on the growth to rural settlement
Increasing density in Bademağacı.

1.3. Morphology of The Site

Morphology of Bademağacı presents a topography based **organic rural settlement pattern** while centre of Döşemealtı has a grid-iron street pattern. Also, the green areas are evenly distributed within the Bademağacı settlement, however; the agricultural field areas are concentrated together.



1.4. Population & Social Profile

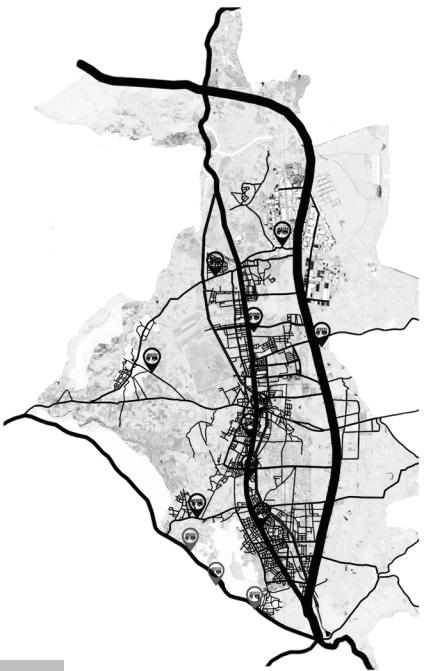


-46-

The Village population is 1311 in 2017. Temporary users are higher than the permanent residents, who are mostly older age. Due to **lack of facilities and high income jobs**, young generation prefer to move to the cities.

The main subsistence economy of the village is **industry, agriculture and husbandry**. However, old fashion techniques and **lack of collectively organised farming** force cause people to work in other sectors. Freight transport business is one of them, done by a big number of residents. Climate of Bademağacı is cooler than Antalya because of the altitude difference. Dry farming (wheat, barley, rye...) is preferred not only because of the cool climate, but also **lack of irrigation system and livestock**. Agriculture is needed to produce some **other products**, which can generate more profit.

1.5.Urban Form & Hierarchy



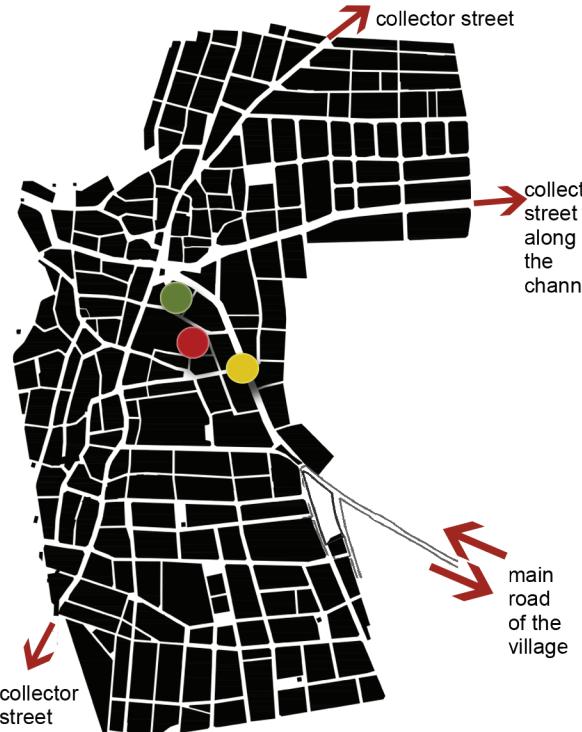
-47-

existing plan



proposed plan by municipality plan

1.6. Street Pattern & Public Place



Lost of scale on the main street



Market place of the Village

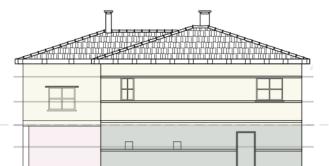


Sqaure of the Village

1.7. Built Form & Architecture



No street hierarchy at all. Street hierarchy of the town is variable. The main street of the town is lost of space. Newly built Market place has lack of vividity.



Existing Traditional Village House



Existing Traditional Village



Existing New Village House



1.8. Built Form & Plot



■ parking	■ terrace	■ housing
■ garden	■ cantilever	■ storage
■ coop	■ balcony	■ barn
■ commercial		

Low-rise buildings are predominantly residential. They define the character of the village. Setbacks distance of buildings, are in all direction and detached. **Organic settlement pattern** changes toward to the fringe and supplants regular plot rhythm, which is **grid**. Landscape elements, such as verges, street trees and green open spaces, are more **dominant** than the built elements. Street lanes and minor streets are needed to define landscape structure. **Agricultural landscape** is under pressure of development due to second-home demand from the population of Antalya and other cities.

1.9. Landscape



1.10. Townscape



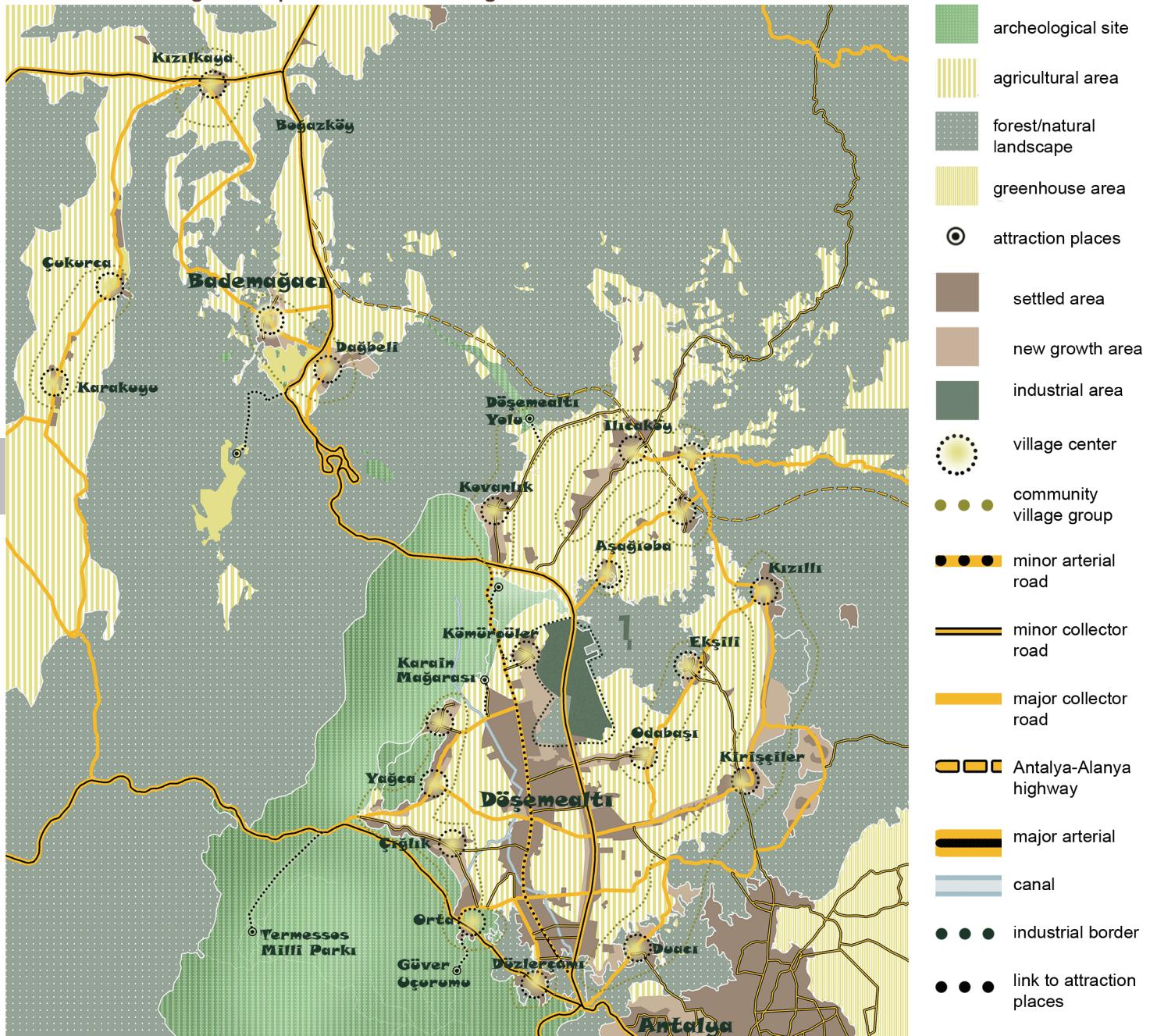
Building height and the mountain are important elements that form the townscape composition of Bademagaci and include the use of:

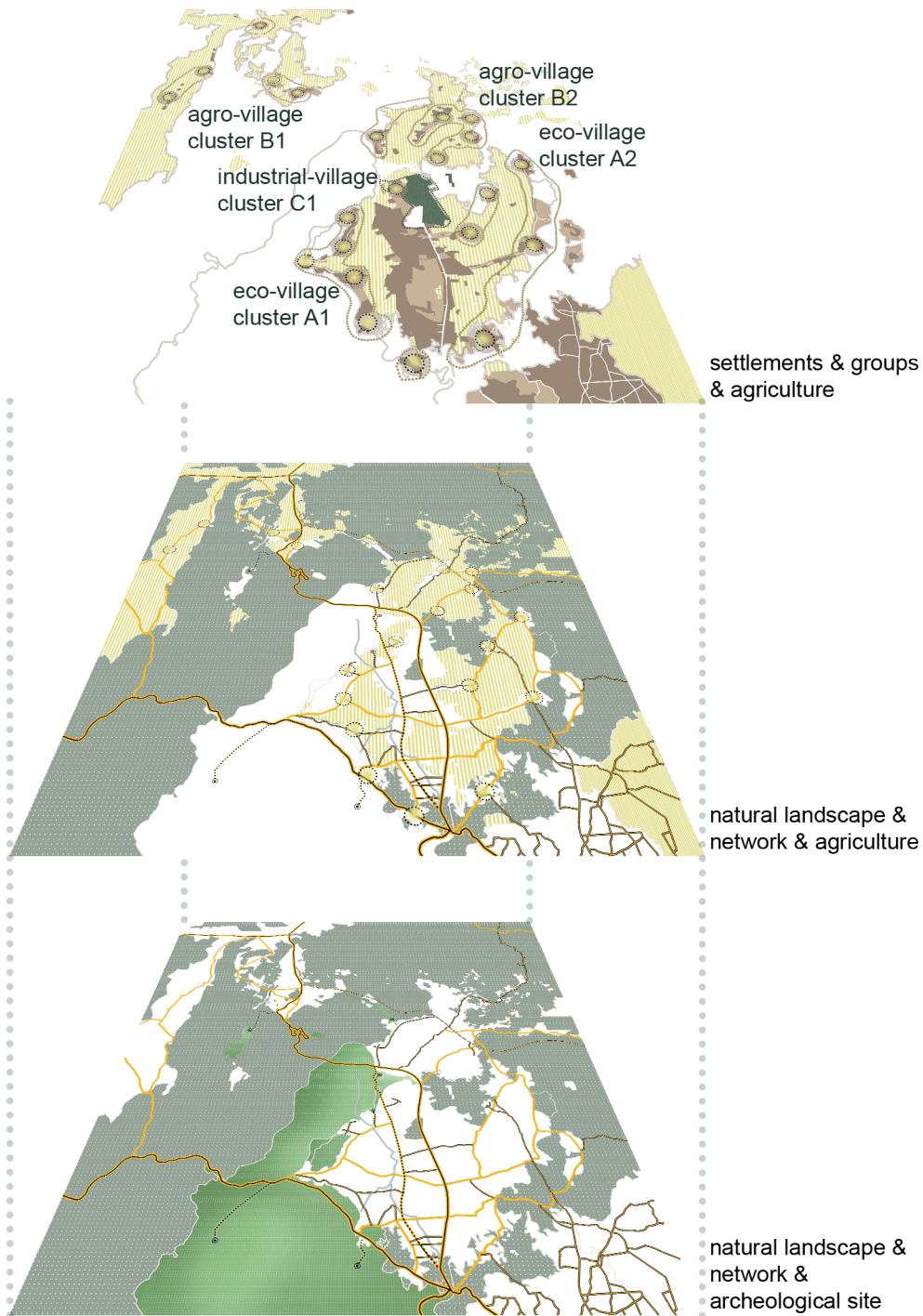
- Building height to hold corners;
- Building and façade treatment to terminate vistas
- Building form to create visual interest.



02. Strategic Perspective

2.1. Macro Strategic Perspective for the Village





COMMUNITY SUPPORTED AGRICULTURE

VILLAGE CLUSTER TYPES

1- Eco-village cluster A1:

Various agricultural products, including those with a high added value, are to be cultivated and agro-nature (skiing, trekking) tourism facilities are to be organized.

1- Eco-village cluster A2:

Various agricultural products, including those with a high added value, are to be cultivated and local market, traditional foods, arts & crafts facilities are to be organized.

1- Agro-village cluster B1:

High concentrated and low variety agricultural products are cultivated and agricultural tourism facilities are organized.

1- Agro-village cluster B2:

High income and various agricultural products are cultivated and agricultural tourism facilities are organized.

1- Industrial-village cluster C1:

High income agricultural products are cultivated. Industrial research are realized on the agricultural products and industrial tourism facilities are organized.

-50-

Preserve the rural character by low-building density control and keep village development within natural boundaries

Make the basis of the agriculture, cultural, nature and agro-tourisms

Integrate education, industry and daily life to the agricultural production

Link the village to a settlement network by collector road

Link the attraction places between each other via the network to increase tourism potential

Integrate the attraction places to near villages by economically oriented village clusters

2.2. Relationship Between Agro-tourism and Rural Development

WHAT ?

Main vision is based on productivity.

Main strategy is to enhance the productive culture through the settlements and to support the village corridor.

Main principle is to lead, guide and inspire people to work cooperatively and to live in maximum density agricultural /animal husbandry space and to integrate cultural, educational, social and economical activities to agriculture and animal husbandry.

Increasing interest and sensitivity towards rural life brings out the concept of agro-tourism (agricultural tourism) by improving the relationship between agriculture and tourism sectors.

Agro-tourism refers to the use of agricultural resources (attractiveness) for tourist purposes with the principle of sustainability. With this strategy, agro-tourism, one of the alternative tourism types, will bring people together by contributing to rural development.

WHY ?*

People living in big cities recognize the importance and value of the natural life. Also, they are separated from, and realize their responsibility for nature. Agricultural tourism provides a very different experience, for all, but especially for children.

-51-

According to findings;

Agro-tourism creates new employment opportunities to locals, Increase income level of them and also contribute their social life,

Agro-tourism employs women workforce and strengthens the role of women in society on this occasion,

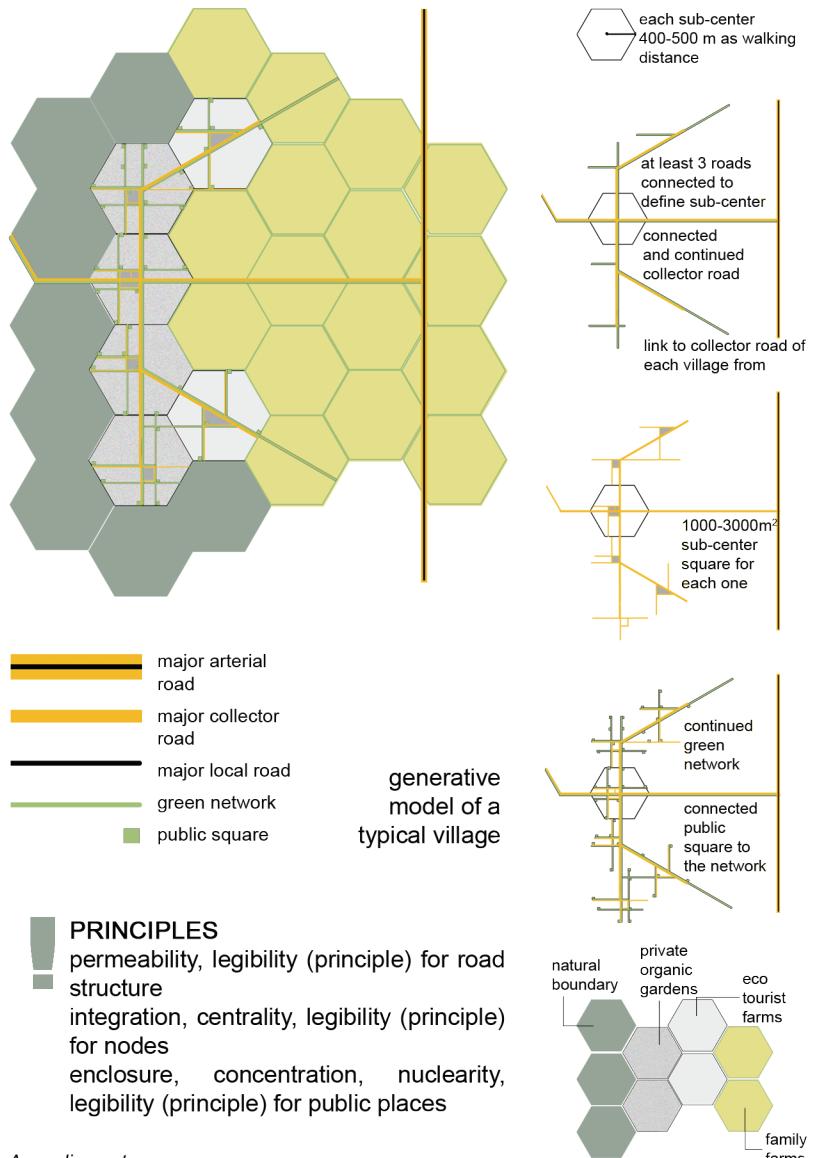
Visitors that experience agro-tourism activities have environmental consciousness and they are respectful to lifestyles, customs and traditions of locals.

*Civelek, C., Dalgın, T. & Çeken, H. (2014). Agro-Turizm ve Kırsal Kalkınma İlişkisi: Muğla Yöresindeki Agro-Turizm Alanlarında Bir Araştırma, Turizm Akademik Dergisi, 15-28.

HOW ?

Bademagaci and the village around still keep the rural characteristics. People tend to continue farming life in good conditions.

In order to support better life style and protect the rural identity of the area, *agro-tourism policy* is needed to attach along the villages. The residents, who are willing to do this shall be organized with the support of the municipality.



According to open space standards of North Norfolk District Council Local Development Framework (2008), open space per person is 56.4 sqm in rural area. Public parks, children's play, playing pitches, natural and semi natural green space are classified under the open space category.



~92m²
existing population per building (1311 people)
1024 building



~92m²
proposed population per building (2948 people)
1424 building





ACTIVITIES

Direct Agricultural Sales:

sales on farms,
roadside stand sales,
agricultural origin gifts,
self-collecting operations

Educational Experiences:

school tours,
nursery tours,
vineyards,
agricultural technical courses,
agricultural fairs, product
introduction programs,
business tours (wine shops / factories ...)

Production:

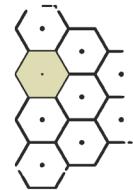
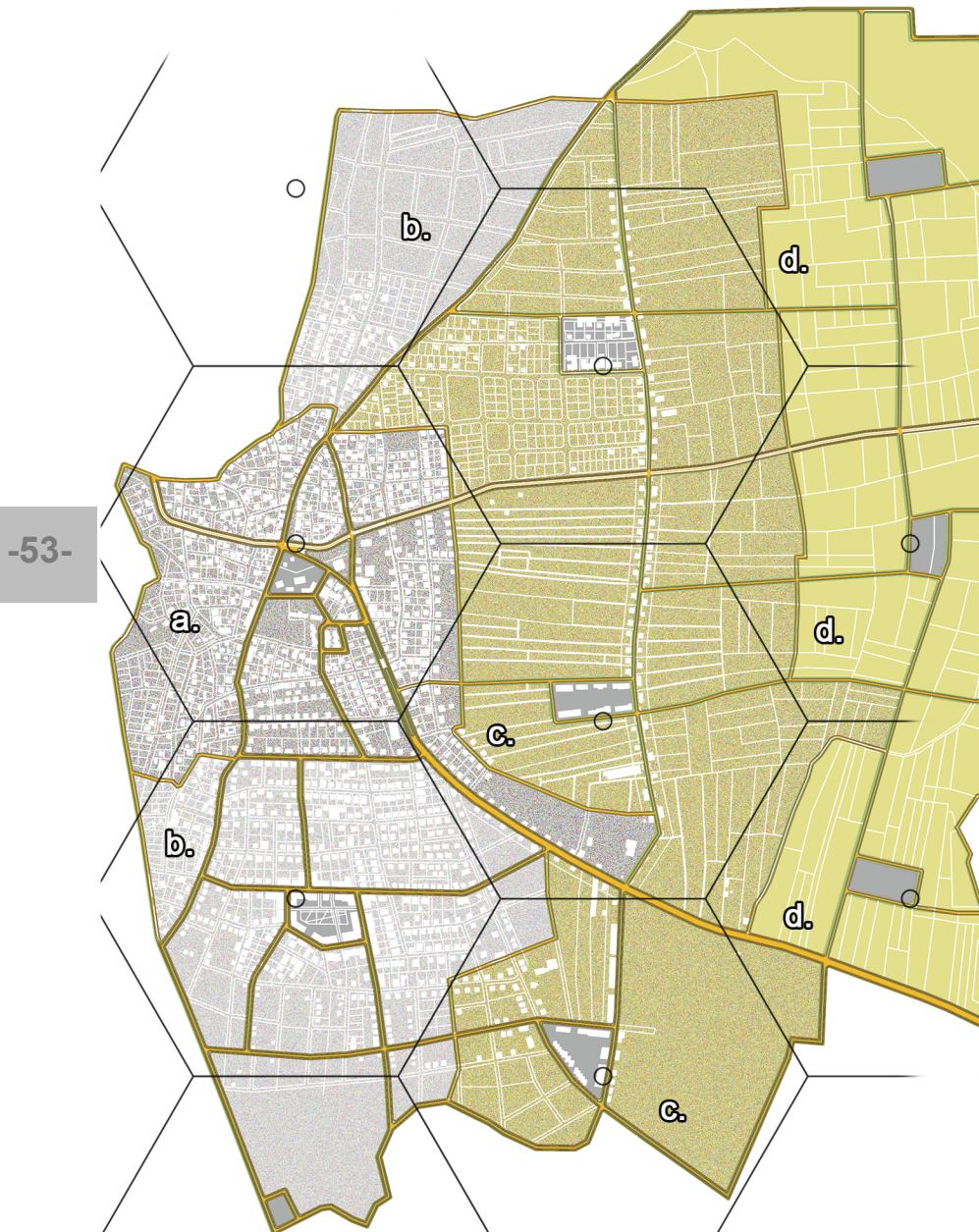
farm visits,
self-collecting activities,
tree rental activities, etc.

See sighting:

trips to historical-cultural areas,
guide / equipment operation,



2.2. Micro Strategic Perspective: Character Areas



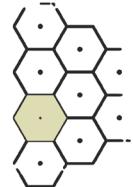
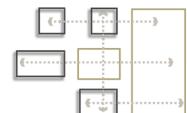
a. Organic Settlement in the Village

The village developed in the north-south direction. New settlements shall be located in this direction and on the mountain platform.



In the whole village, the houses are detached. First floor, of some houses has a barn, so people keep their animals under their home. But, according to the Municipal Law, this is forbidden, as it is unhealthy and unhygienic. Each barn is separately located from the house within the plot.

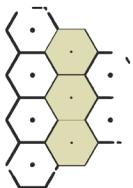
Agricultural Production Based Settlement



b. Newly Developing Settlement

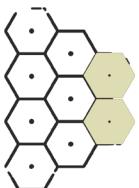
Fertile agricultural land is mostly used to raise wheat, barley, rye etc. On the one hand, it is good for livestock, on the other hand, the work is too much since the income is low. Other production shall be considered.





c. Agro-Tourist Farms

Each hexagon area is
~500.000 m² total
450.000 m² farmland
50.000 m² subdivision
10.000 m² livestock,
public places etc.



d. Family Farmland

Family farms frame the perimeter of the village maintaining Bademagaci's unique landscape character.



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03. Design Principles and Rules

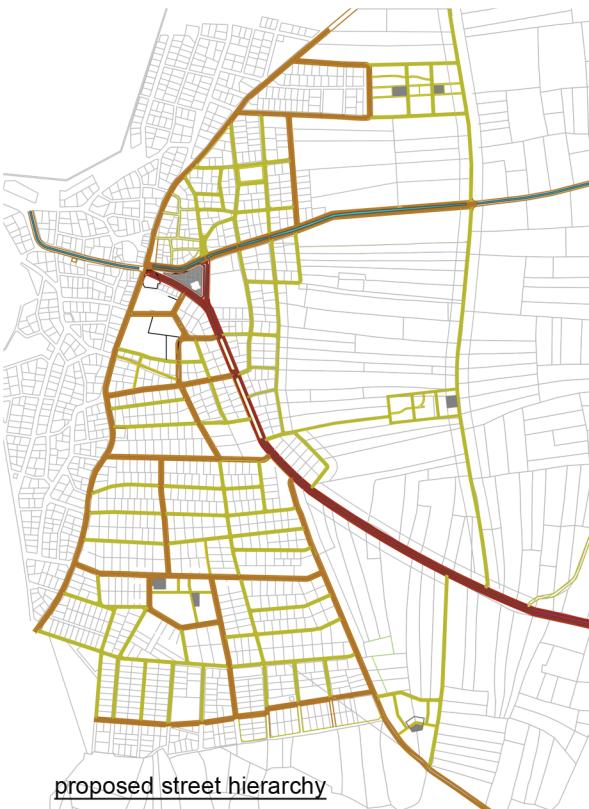
	organic settlement	developing settlement	agro-tourist farmland	family farmland
Street Type	main road, collector and local street	collector and local street	local street	—
Land use	housing, bazaar, shops, mosque, playground, community facilities	housing, bazaar, shops, hostels, playground, community facilities	housing for Farm Community, farms, hostels, playground, livestock, community facilities	—
Building Type	traditional village house detached, semi-detached	traditional village house detached, semi-detached, mixed use	rainwater harvesting house, detached, barn...	—
Height	2 storey	2 storey	2 storey	—
Open Spaces, Landscape	village square, bazaar, playgrounds, street trees, park, private gardens	bazaar, playgrounds, park, private gardens, street trees	farmland, wood, playgrounds,	farmland, wood

03. Design Principles & Rules

3.1. Street Pattern



existing street pattern



proposed street hierarchy

permeability, legibility (principle) for road structure
 integration, centrality, legibility (principle) for nodes
 fractality to reduce the speed

main road
 collector street
 local street

Road Hierarchy

- Highway: High speed with limited pedestrian access for intercity connections
- Arterial/Main: Mostly between urban centers for highest level of service, thus traffic volume is high. Main purpose is to collect traffic from collector and deliver onto major hubs or highway
- Collector: Majorly for collecting traffic to and from local streets. They connect the local with the arterial and speed limit is usually between 30-50km/h
- Local Road: Full access and designed for low volume traffic with low speed

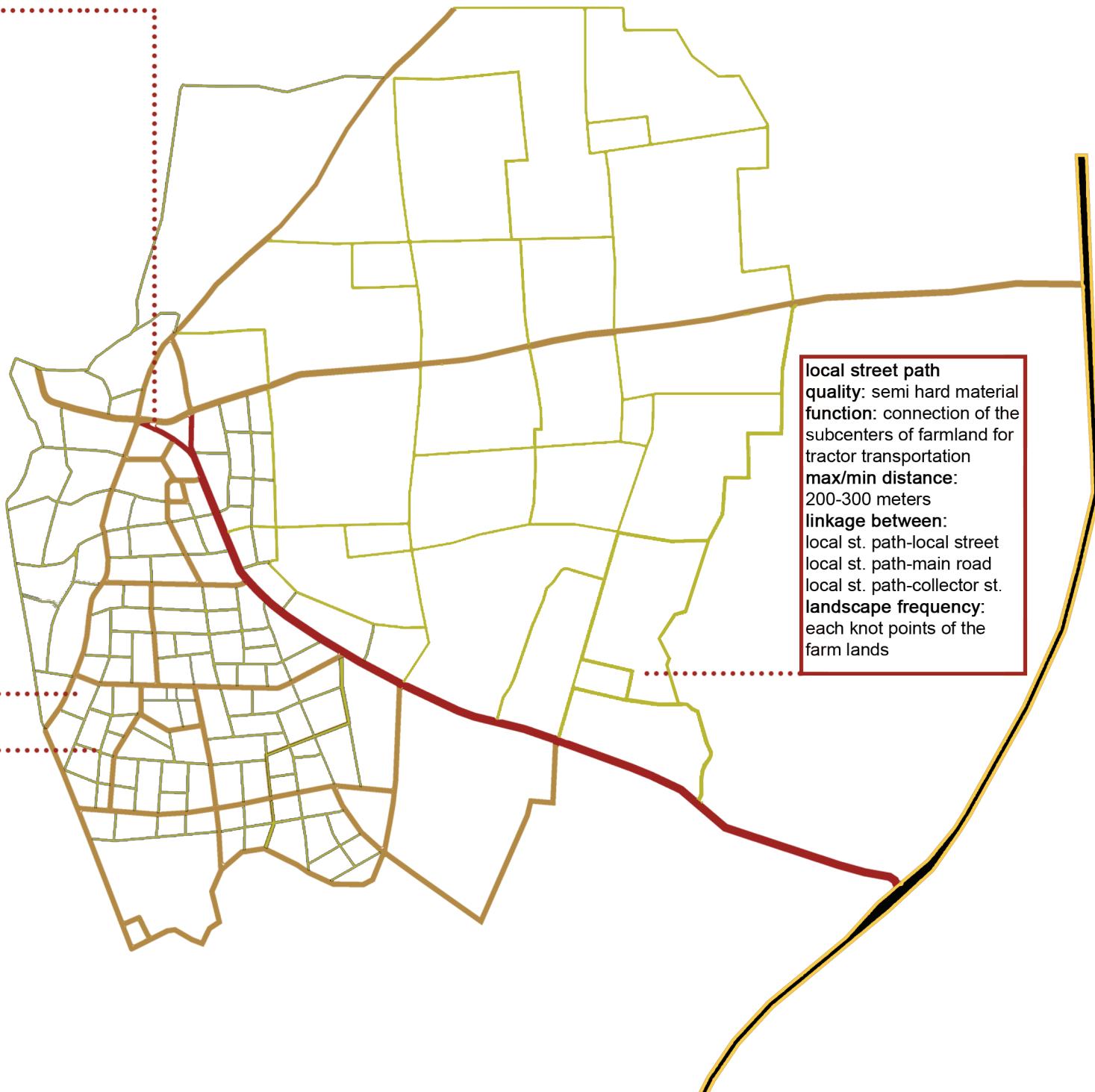
Bademacı has a main road which connects the village to the Burdur-Antalya highway. A hierarchical street network is planned and proposed, by referencing to the main road and the center of the hexagon, which are in the settlements. Therefore, collector streets are reorganized by considering settlement area centers. To protect the agricultural lands, roads are planned maximum 7 meters width and a trace of the existing roads in farmland.

main road
quality: hard surface
function: connection between village and highway
max/min distance:
2-2.5 kilometers
linkage between:
main road-highway
main road-collector street
main road-local street
landscape frequency:
20 meters between trees
more than 8 meters height

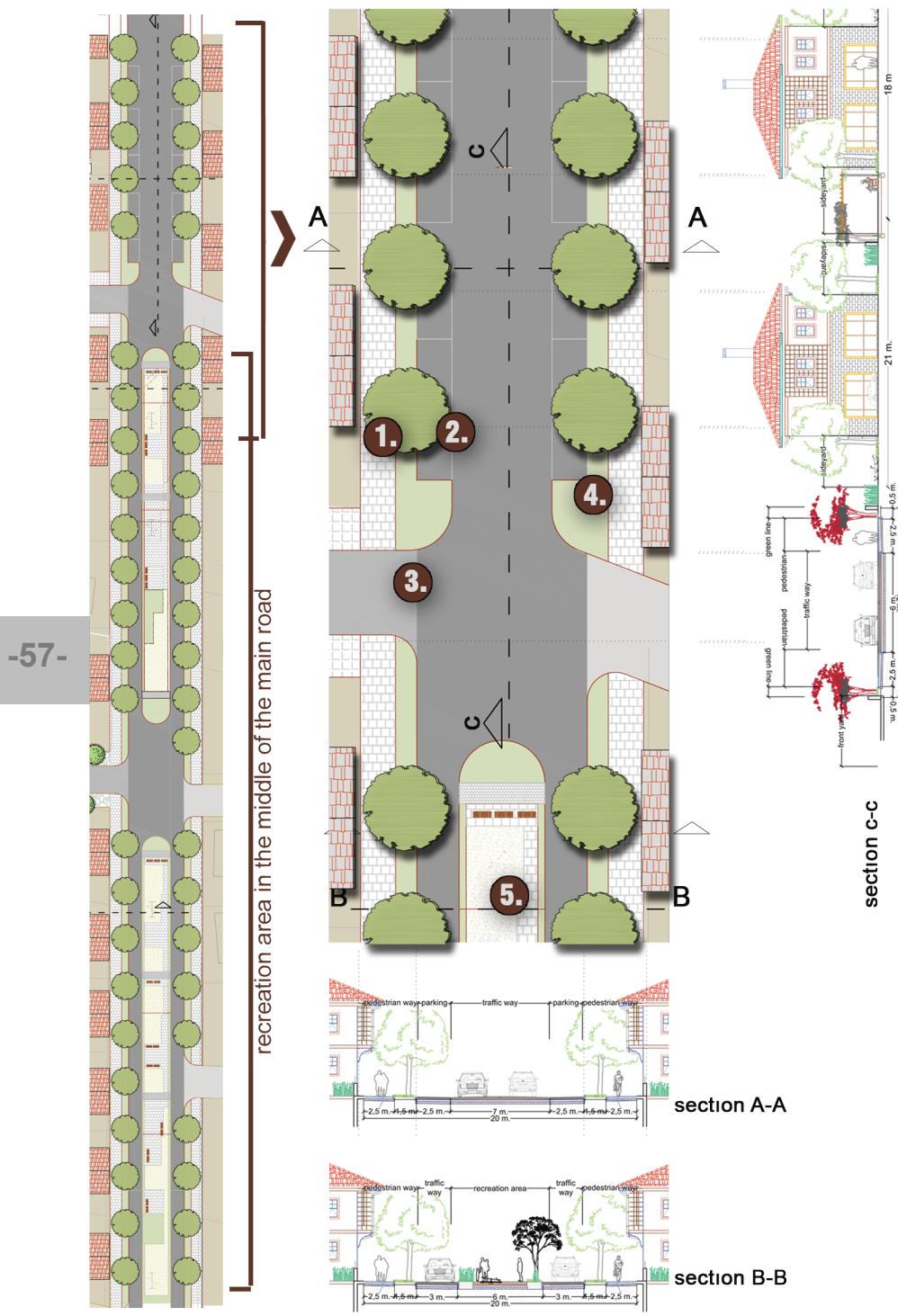
collector street
quality: hard surface
function: linkage between subcenter of agrovillages
max/min distance:
100-200 & 200-300 meters
linkage between:
collector street-local street
collector street-main road
collector street-collector street
landscape frequency:
10 meters between trees
more than 5 meters height

local street
quality: semi hard surface
function: service to the blocks
max/min distance:
100-200 & 200-250 meters
linkage between:
local street-collector street
local street-main road
local street-local street
local street-local st. path
landscape frequency:
least one tree within plot
various height





3.1.1. Main Street



1.

Shops:

First floor of located buildings will be shops along the main street.

2.

Parking lot:

Parking lots are located between green line and the traffic way. Dimension of the lots are 2,5*5 meters. The boundry of the lots will be built with a different material to define them.

3.

Pedestrian Way:

2,5 meter width within pedestrian footpath.

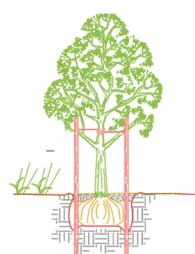
4.

Green Line and Street Planting:

Street trees to be clear stemmed to 2.5m set in simple tree pits. Tree locations and spacing to respect highway sightlines.

The use of trees in the public realm is important to establish the character of streets and the landscape framework for Bademagaci.

All trees should be planted into well-prepared tree pits using urban tree soil (or similar) if in paved surfaces.



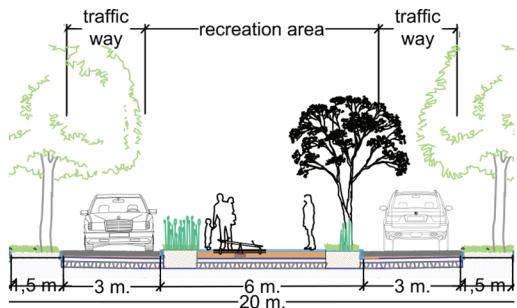
For supporting the trees the wooden bar shall be implanted.



5.

Recreational Area:

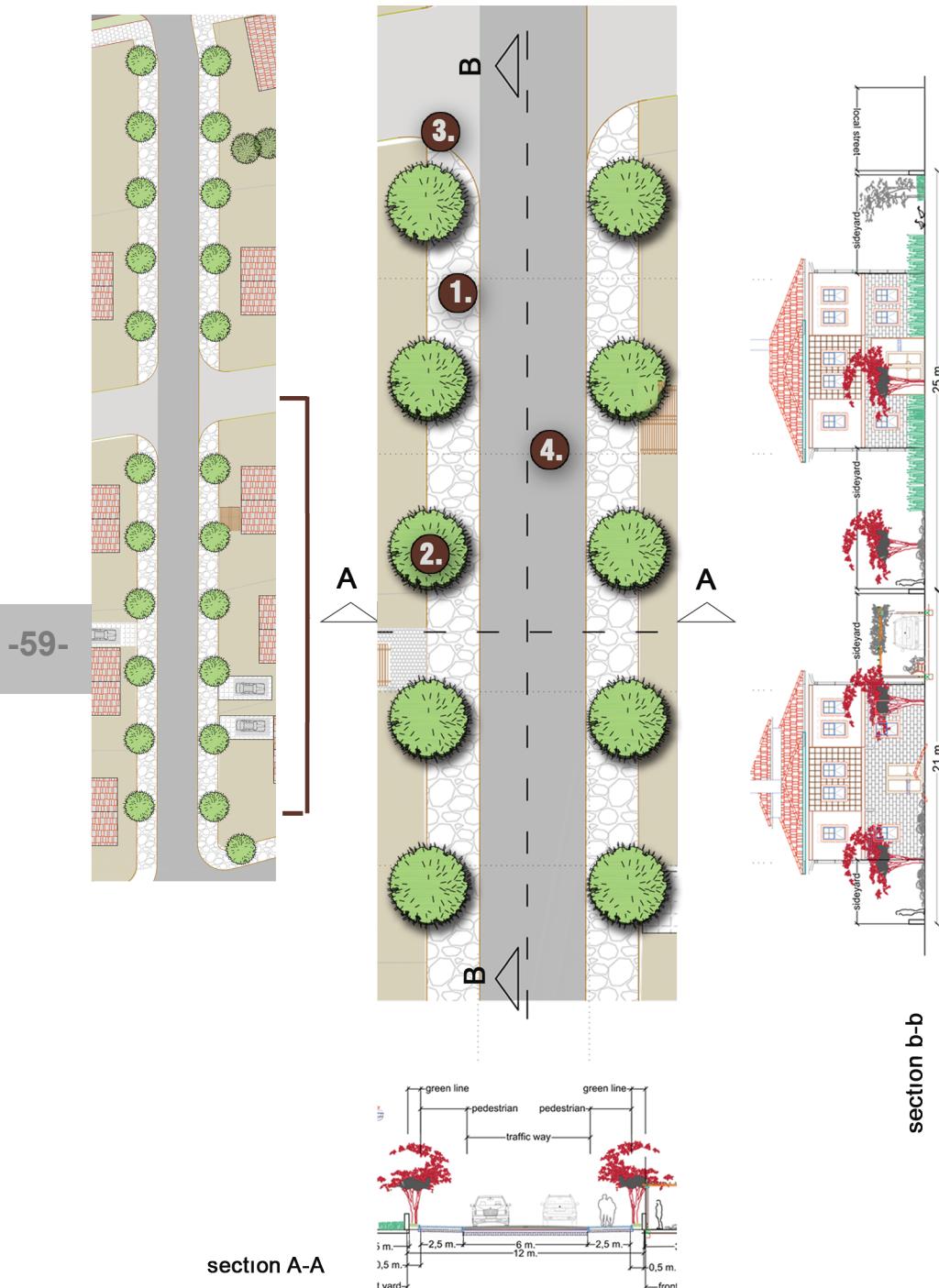
The broad alignment of these street lies approximately northeast-southwest. The playground and sitting places on these streets must be situated in the centre of the street in order to make the place vivid enough. In this case the streets are effectively reduced to a pair of one way streets either side of the recreation area. Also the lack of gathering and the living places of the town caused this recreation area in the middle of the main street where the shops are mostly located.



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3.1.2. Collector Street



1. Pedestrian Way:

2,5 meter width pedestrian footpath.

It can be paved with a semi-hard, durable surface such as concrete, cobblestone or brick. To allow car parking in gardens permitted to the entrance of the car.

2. Green Line and Street Planting:

Street trees to be clear stemmed to 1 meter set in simple tree pits. Tree distances will be 10 meter.

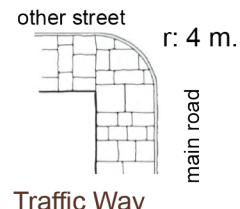
Trees will be located just the beginning of the plot boundary to protect privacy.

The use of trees in the public realm is important in establishing the character of streets and the landscape framework for Bademagaci.

All trees should be planted into well prepared tree pits using urban Tree soil (or similar) if in paved surfaces.

The trees of collector street will be not big as much as main road's trees.

3. Intersection of main road and other street:

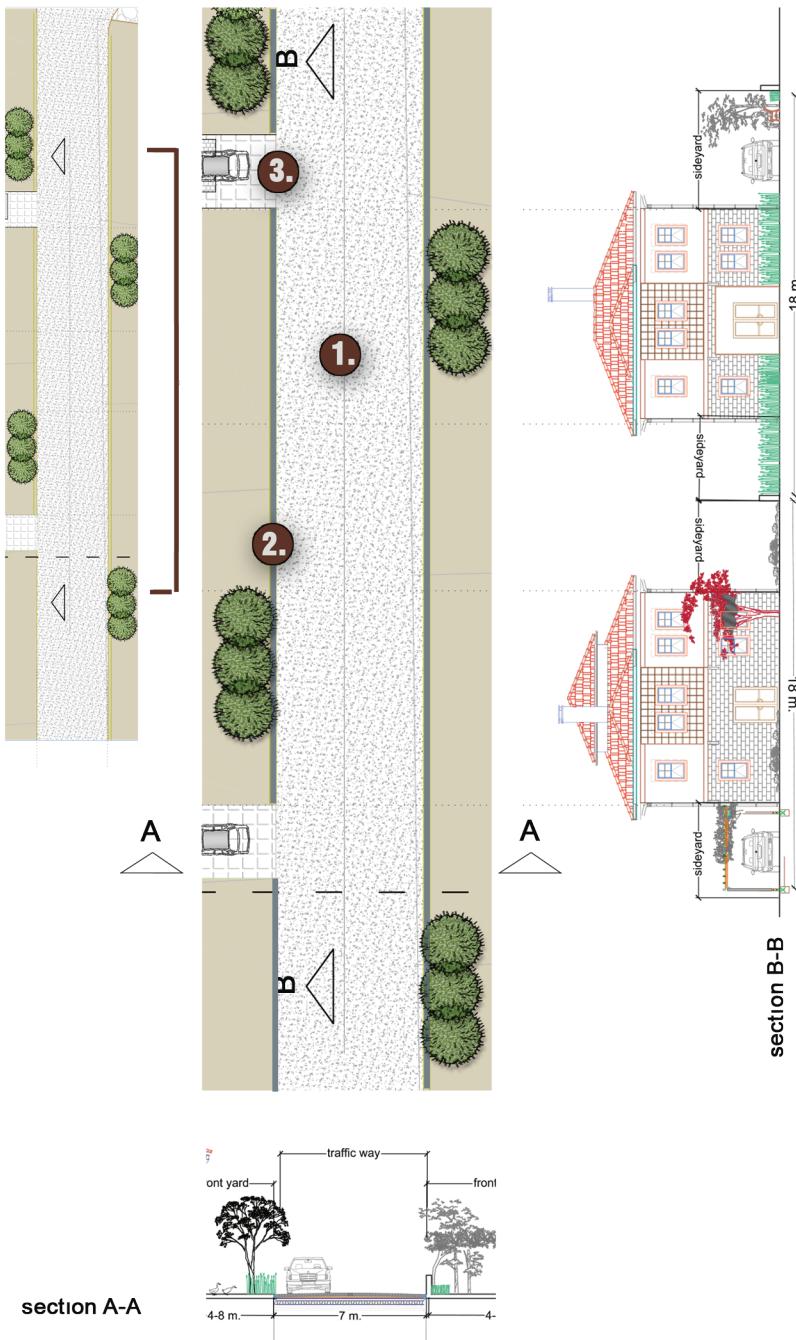


4. 6 meter width traffic way.

The material of the collector street will be nature stone or concrete cubic stone.



3.1.3..Local Street



1. Traffic Way:

7 meter width in traffic way.

The local street will be paved with a hard, durable surface such as concrete, cobblestone or brick.

2. Boundary Materials between street and plot:

In Bademtaşçı, boundaries are typically created by:

*Hedges

*Shrub

which are mostly natural material. So these elements shall be used 50-80 centimeters. height.

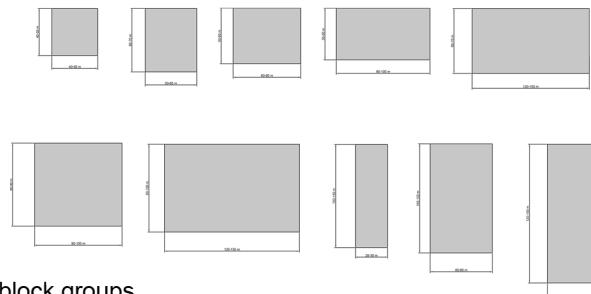
3. Vehicle Entrance to Plot:

-60-

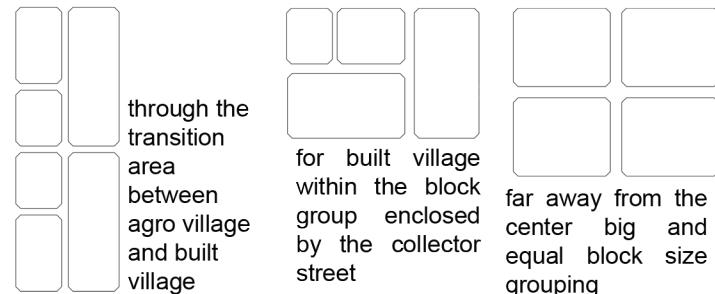


3.2. Block Formation

Built Block Types



block groups



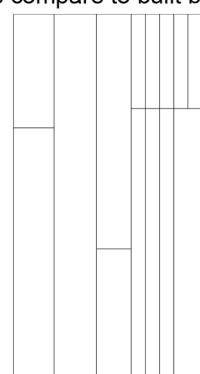
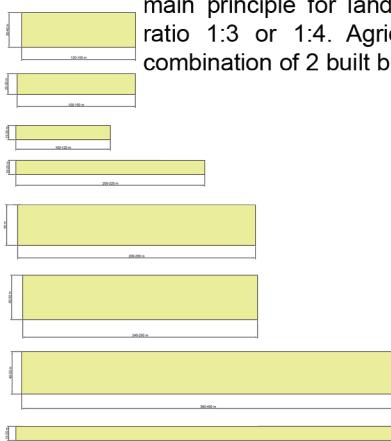
-61-

continuity, variety of land uses, legibility for block and plot(principle)

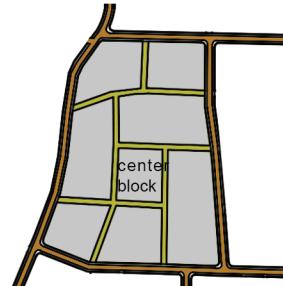
coherence, clustering, legibility, robustness, visual

Agriculture Farmland Block Types

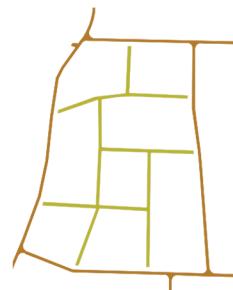
Configuration of the agriculture land is applicable for both vertical and horizontal direction. Linearity is the main principle for land grouping so the width/length ratio 1:3 or 1:4. Agriculture land equals to linear combination of 2 built blocks compare to built block.



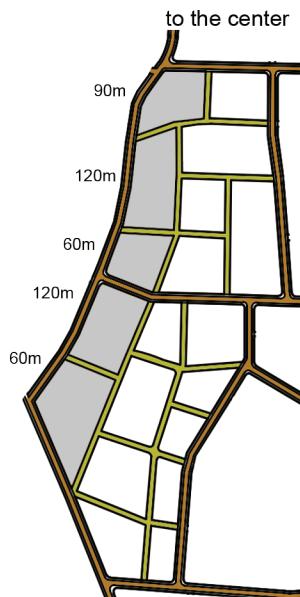
enclosure of center block in the block groups



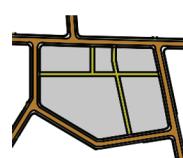
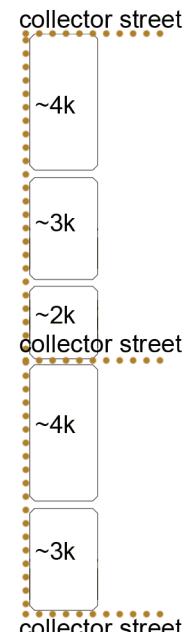
fragmented local street



various and rhythmic block organisation in the vertical direction



verticality along the collector street from center to center

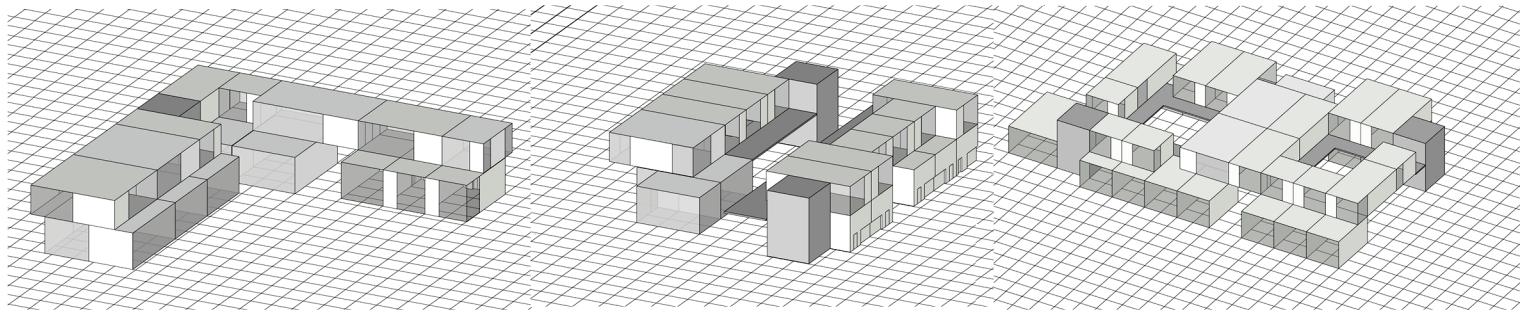


enclosure of one block sub-center by collector street and they are one big size blocks which their areas vary within 1000-3000m².



3.2. Building Formation

Type 1: Sub Center Buildings for Public Uses



form/shape: L-I-O shape and attached

Block facade is the longest side of the block, so the orientation of the entrance of building faces the longest side.

distance: 5 meters setback on ground floor for sub center block, 3-5 meters through collector street, 0 meters for main road.

Side setback will be 3-5 meters even in local street.

30-60m facade length and 12-18 meters width

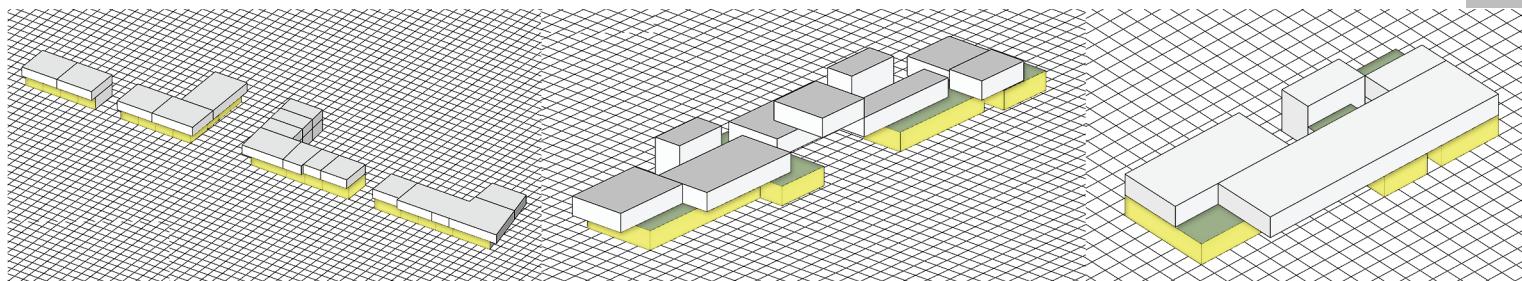
section: 2 storey, front facade cantilever 1-3 meters

Backyard terrace 2-6 meters

transparency: 60-90% transparent façade on collector road and within sub-center block

enclosure block
continuity facade
permeability by building
voids or between buildings
to the open spaces

Type 2: Near Sub Center Buildings for Public Uses



form/shape: I shape and attached

distance: 0-3 meters setback for ground floor 30-80 meters facade length and 12-18 meters width

section: 2 storey, front facade cantilever 1-3 meters

backyard terrace 2-6 meters for buildings with having common park blocks and cross transition through the building

transparency: 30-60% transparent façade on collector road and within common park block

distance between two buildings: 7-10 meters for organic village, 15-20 meters for main road, 9-12 meters for local street

-62-

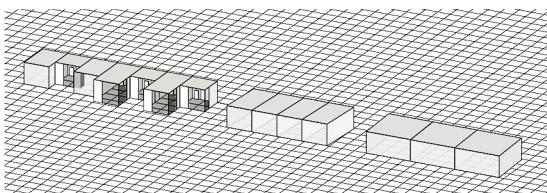
Type 3: Farm Land Buildings for Public Uses

form/shape: I shape and semi attached/ attached

distance: 3-5 meters setback 80-120 meters facade length and 6-24 meters width

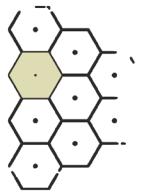
section: single storey

transparency: 30-90% transparent façade within sub-center block

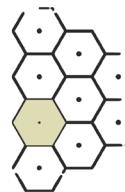


3.2. Block Formation

Residencial Block Type

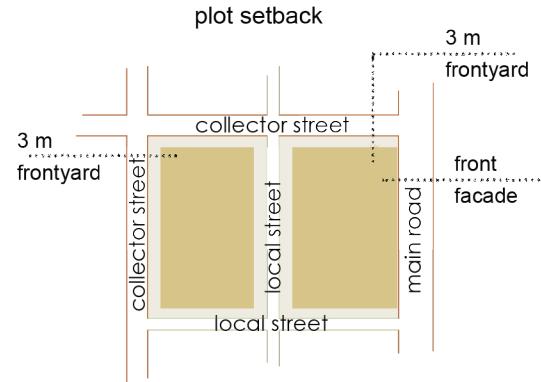
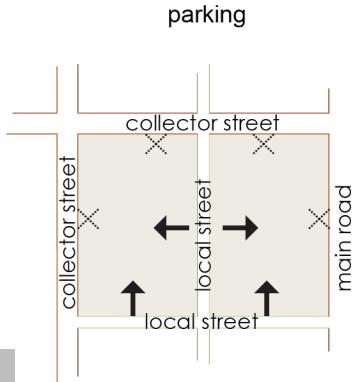


Typical residential block in Bademağacı is composed of **detached houses** with front and block gardens. While the blocks are shaped organically in the center of the village, newly developing areas have a **grid** plan layout.

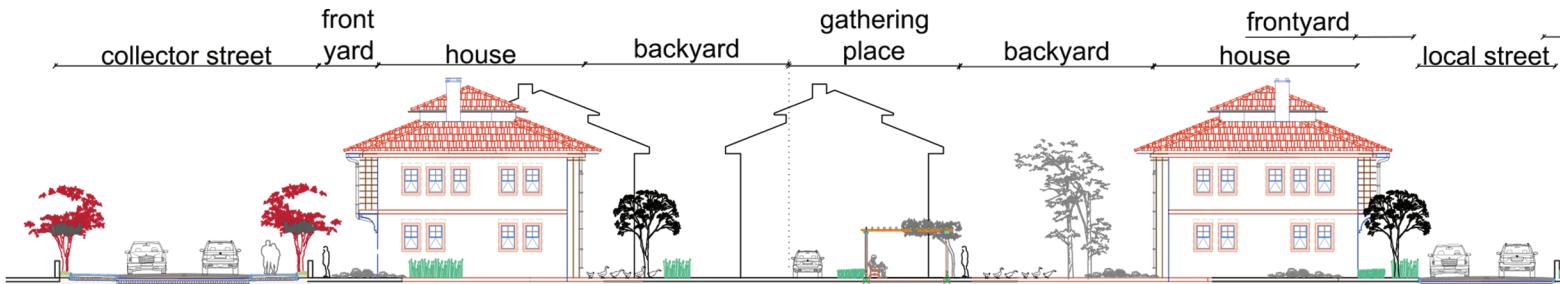
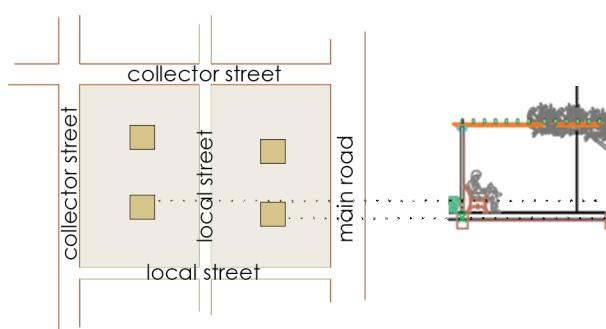
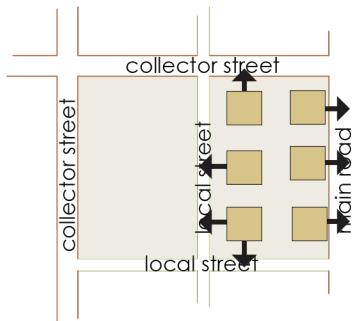


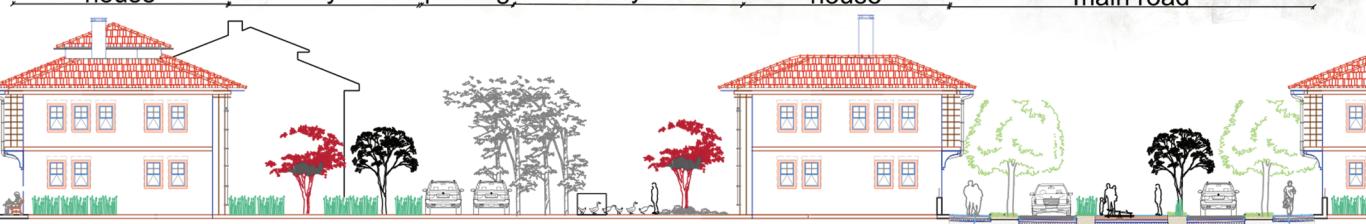
Residential block type is valid for both organic settlement and newly developed areas.

Parking will be able to use in each plot.



housing orientation according to street hierarchy





A

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residential block simulation

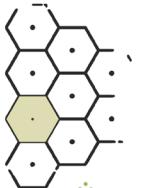


residential block simulation



Newly Developed Settlement - Center Block Type





Market Place Code

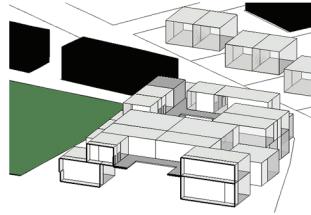
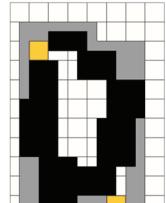
Density: 20-30% for ground floor. 1st floor coverage ratio 10%. 2nd floor coverage ratio 5%.

hmax: 12 meters when necessary

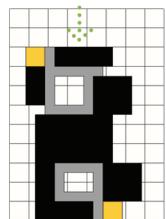
Set back: 2-2-2 or 2-1 rhythm for 6*6 meters grid along the collector road.

Transparency: 90-70% transparent for collector road and 50-10% for local road.

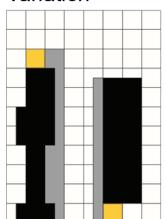
ground floor composition



courtyard variation



fragmented courtyard variation



linear street variation

■ vertical circulation
■ horizontal circulation

sitting areas...)



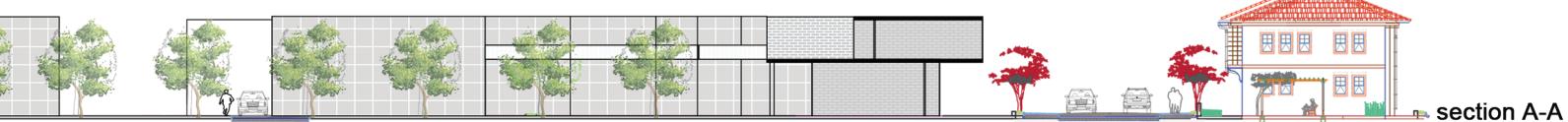
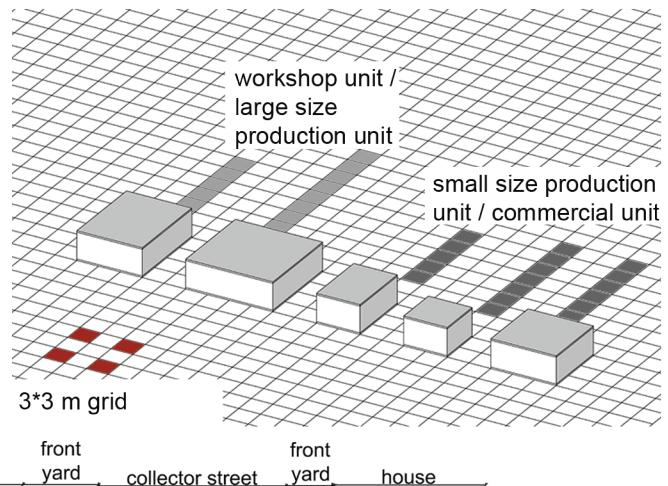
attached building formation is applied to enclose the sub center.

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transparent facade
through the collector
road

backyard terrace

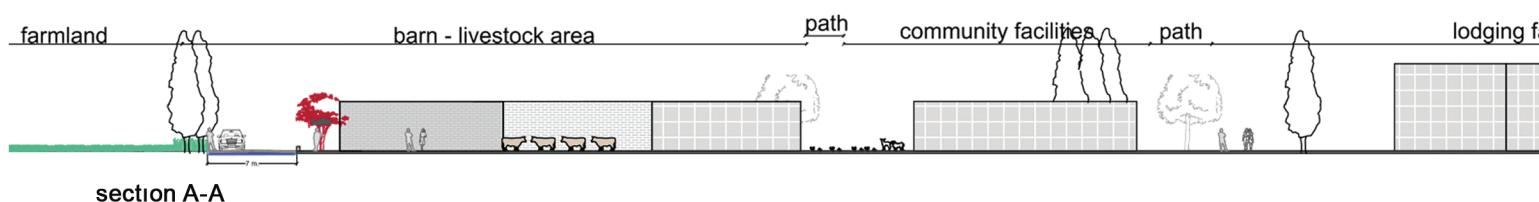
community center



Agro-tourist Farmland Center Block Type



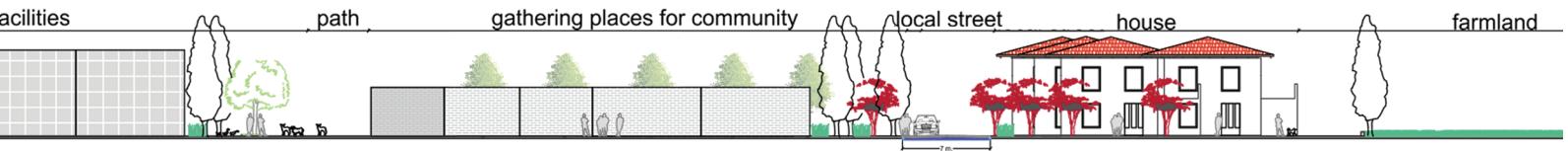
-69-



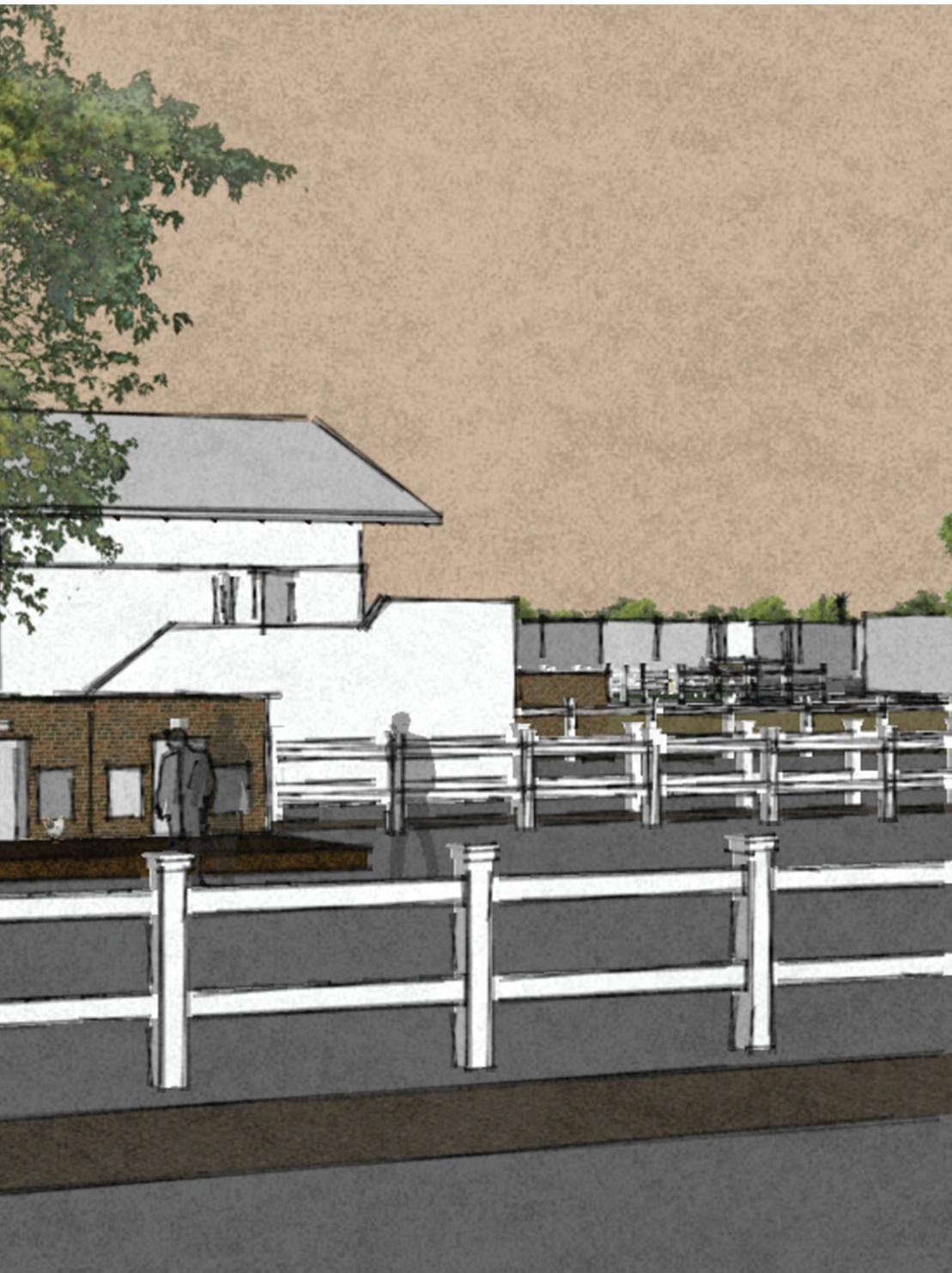


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Block Simulation







Agro-tourist farmland
block simulation





Agro-tourist farmland
block simulation

3.3. Open Space System and Landscaping

Street Planting



- Main street planting network
- Collector street planting network
- ! continuity, legibility, robustness, visual appropriateness, richness, personalisation (principle)

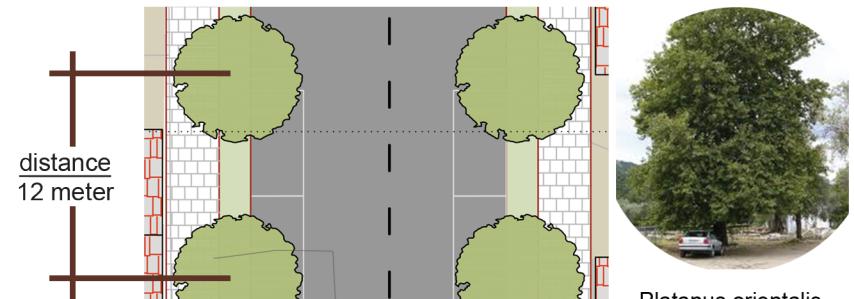
adaptation to the street hierarchy

continuity

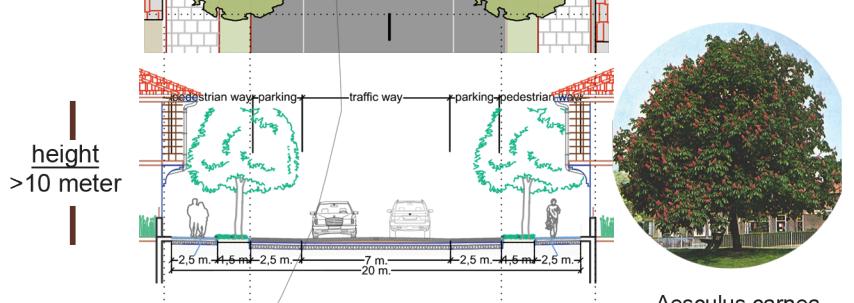
high of space perception

coherent relation

Main Road Planting Code

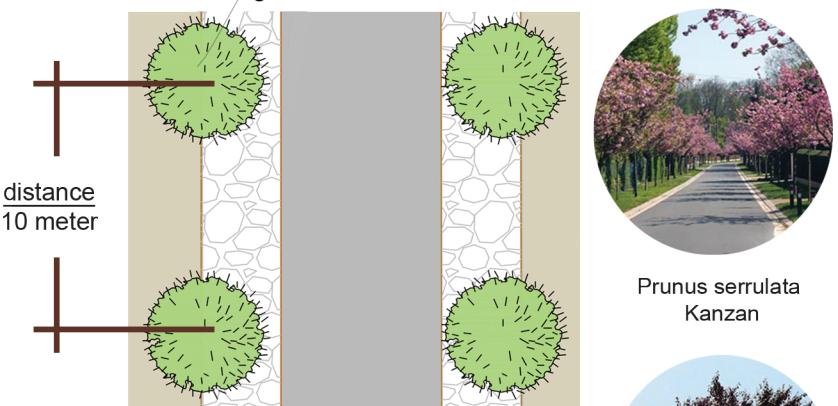


Platanus orientalis

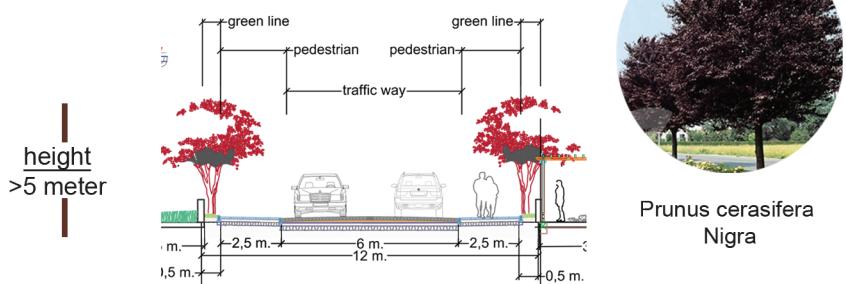


Aesculus carnea

Collector Street Planting Code



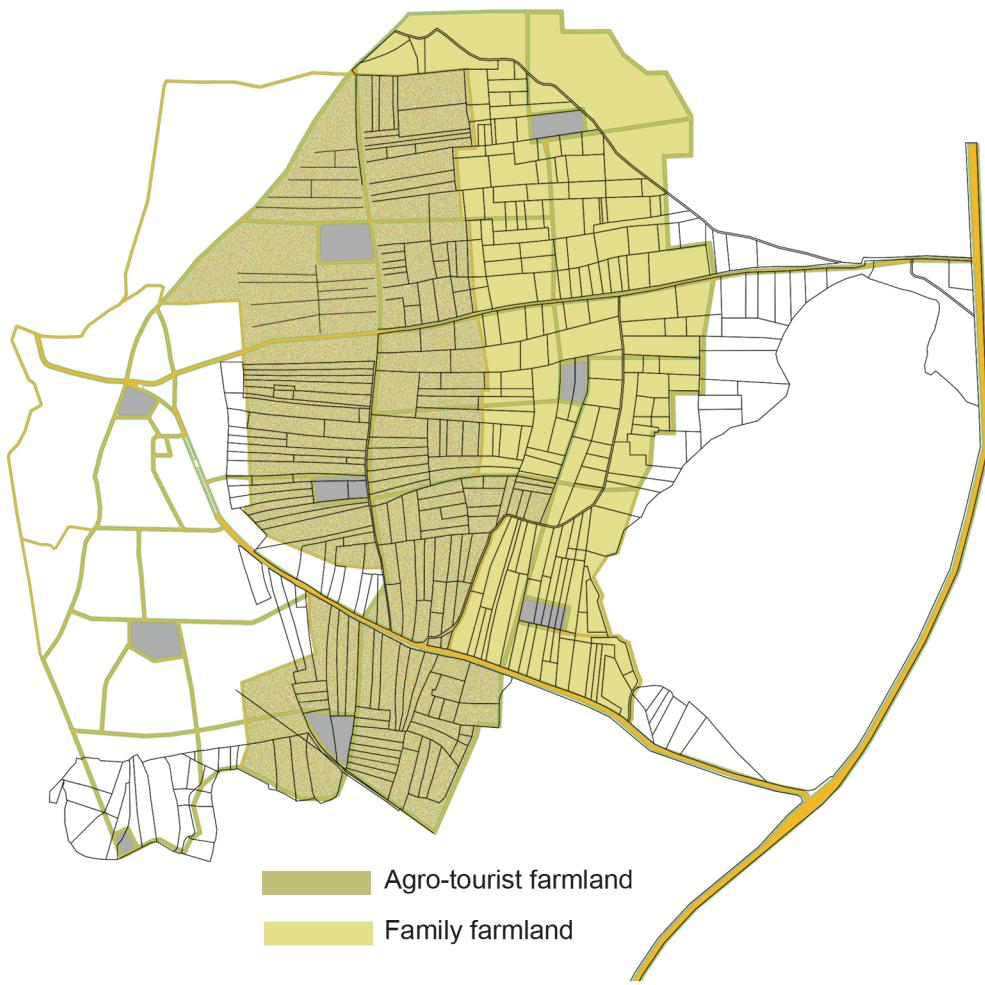
*Prunus serrulata
Kanzan*



*Prunus cerasifera
Nigra*



Agricultural Land Planting



For high-income agricultural production



Lavandula officinalis



Chenopodium quinoa

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There is no planting around the sub center block and public square of the center to enhance visual perception of the space.



fodder (wheat,barley)



vineyards



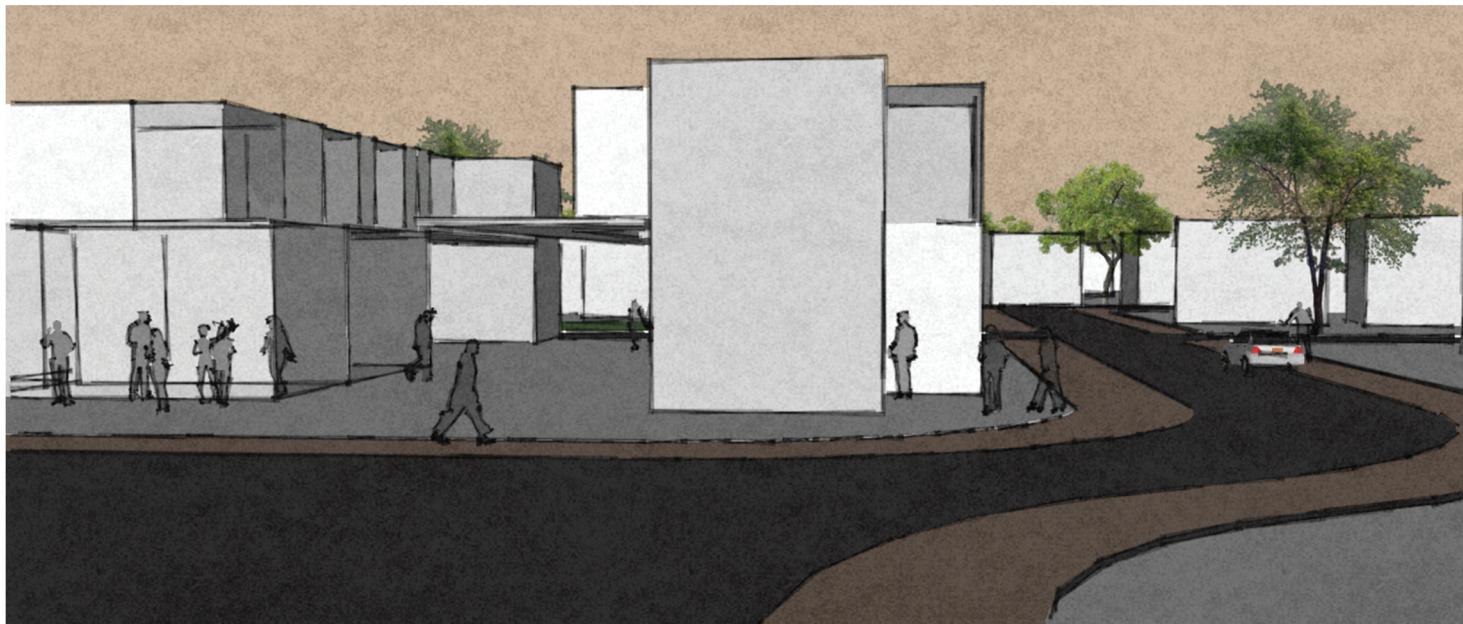
Woody ornamentals

Public Spaces



- organic settlement center
- newly developed settlement center
- agro-tourist farmland center
- family center





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04. Design Simulations



(1km² Plan compared to existing map)

