

**housing:
a process beyond product**

Do you live in a house in one such housing schemes?

(if not, imagine..)

Atishay Shivalay

3/4 BHK Living



Olive Residency

2 BHK Living

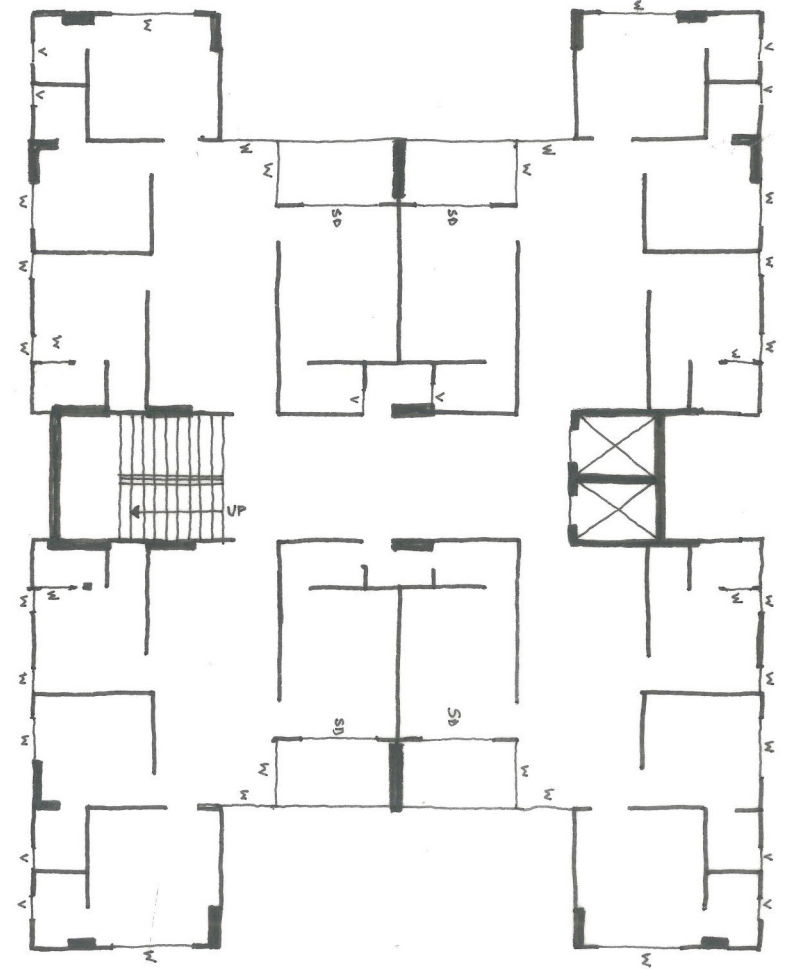
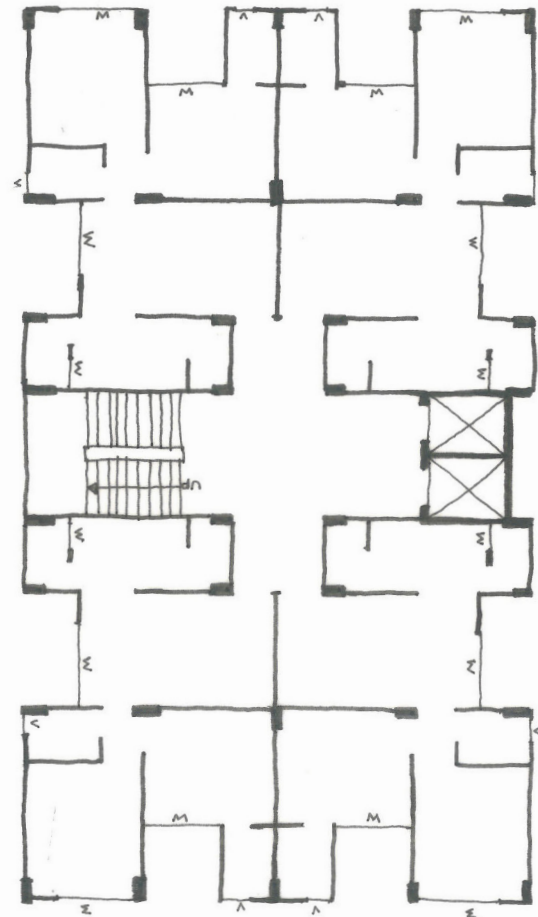
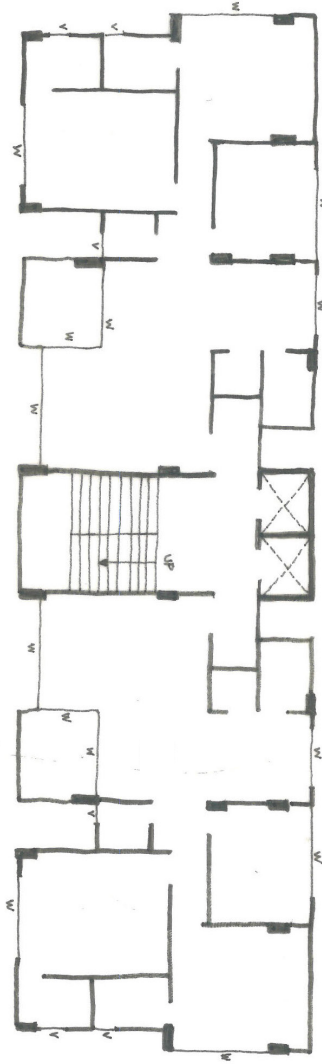


Walk-up Apartments

Shashtrinagar, Ahmedabad

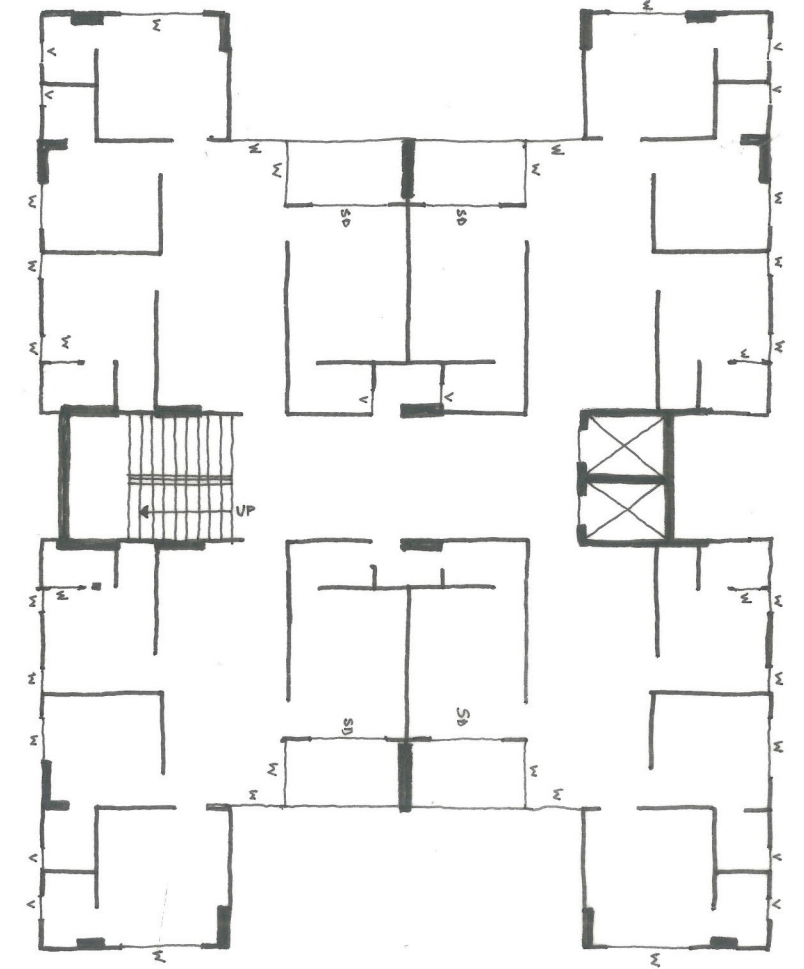
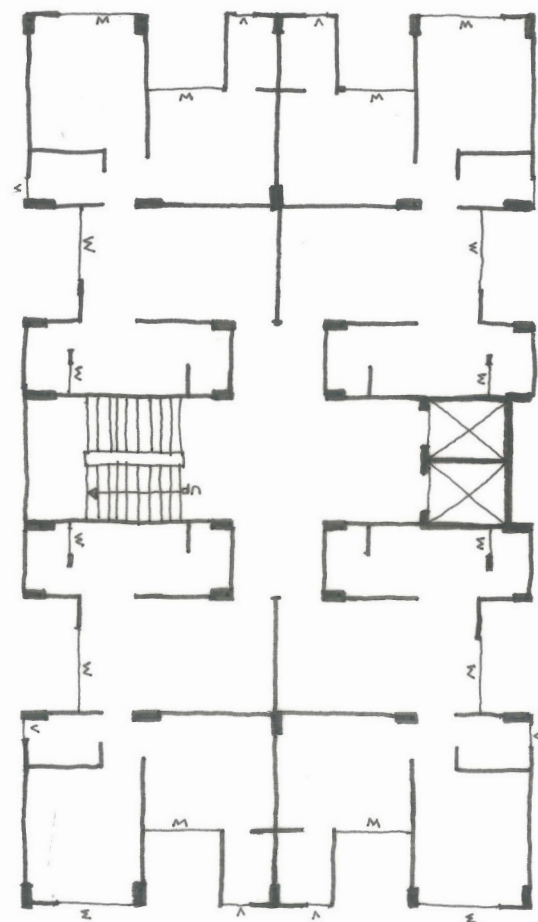
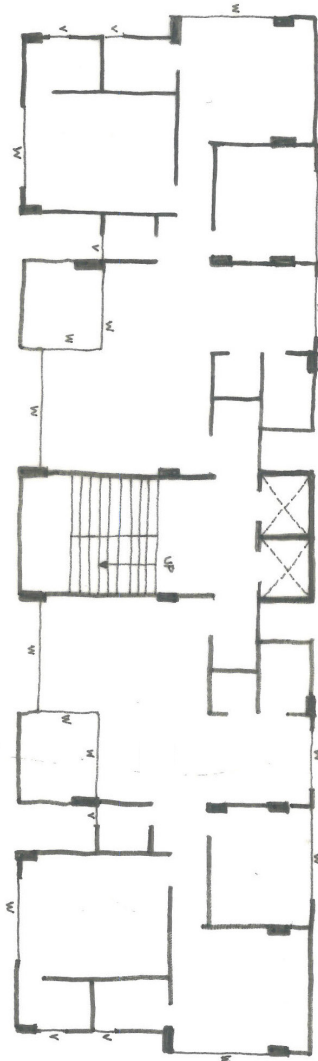


now



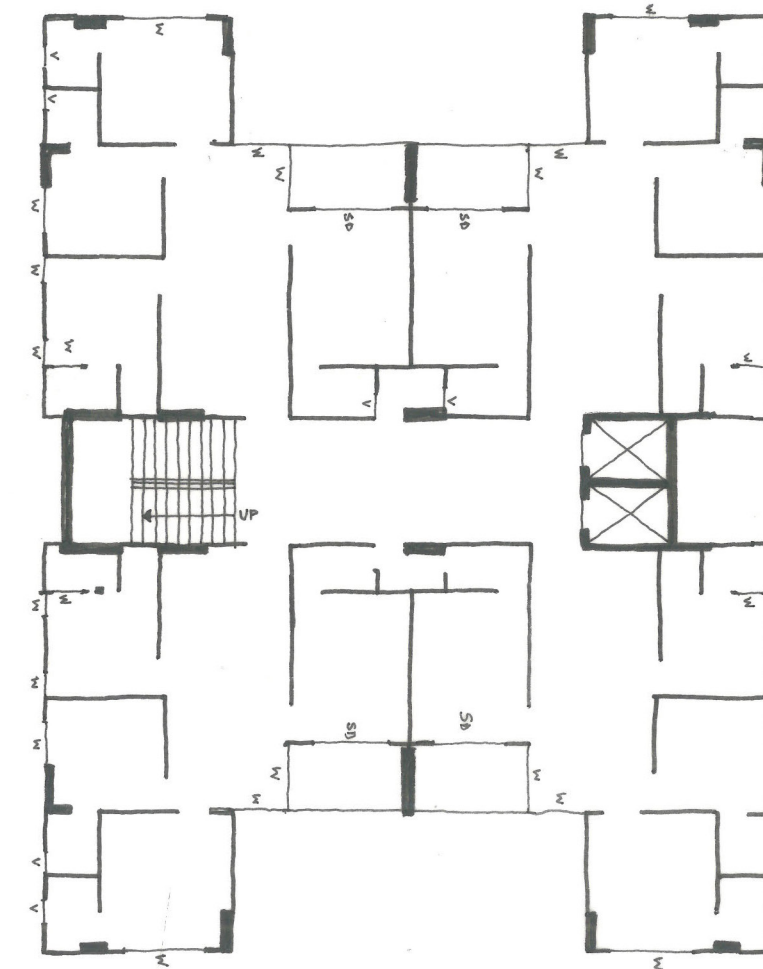
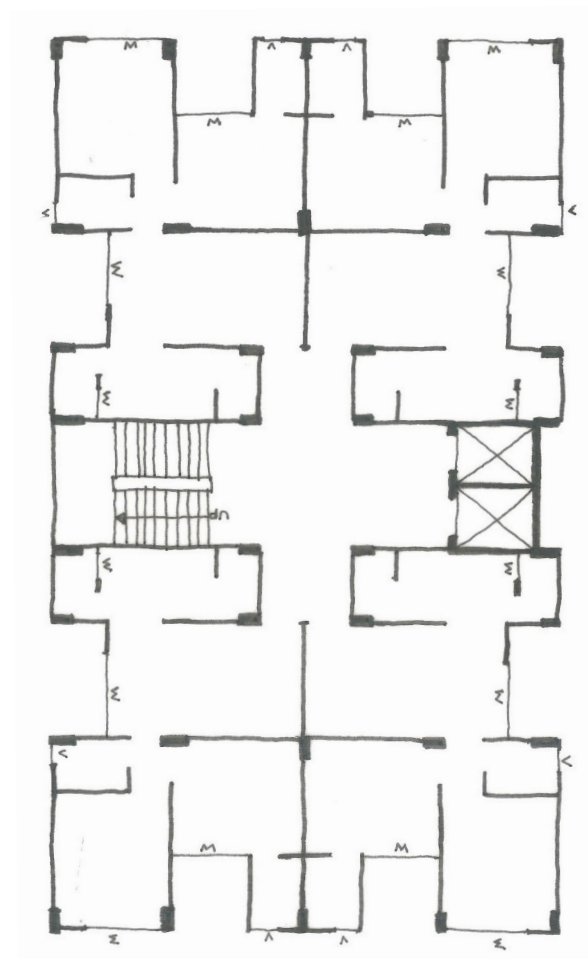
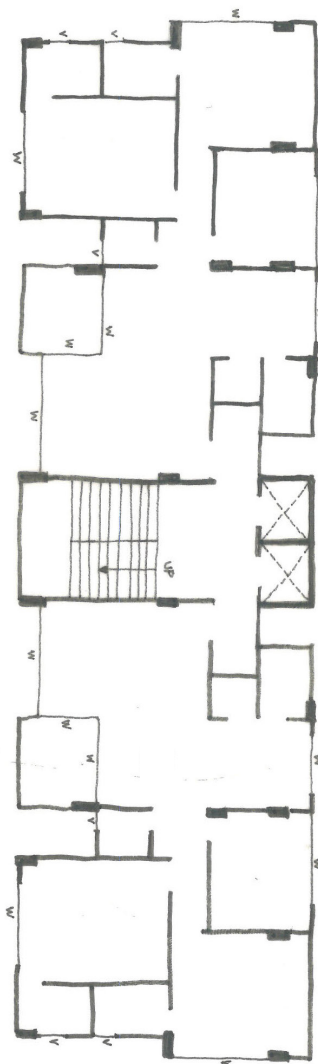
- *Are you, in all aspects, satisfied for the spaces provided in your house by the developer?*

5-10 years from now



- *Are you, in all aspects, satisfied for the spaces provided in your house by the developer?*
 - *Do you feel your house will require alterations over a span of few years?*

25+ years from now



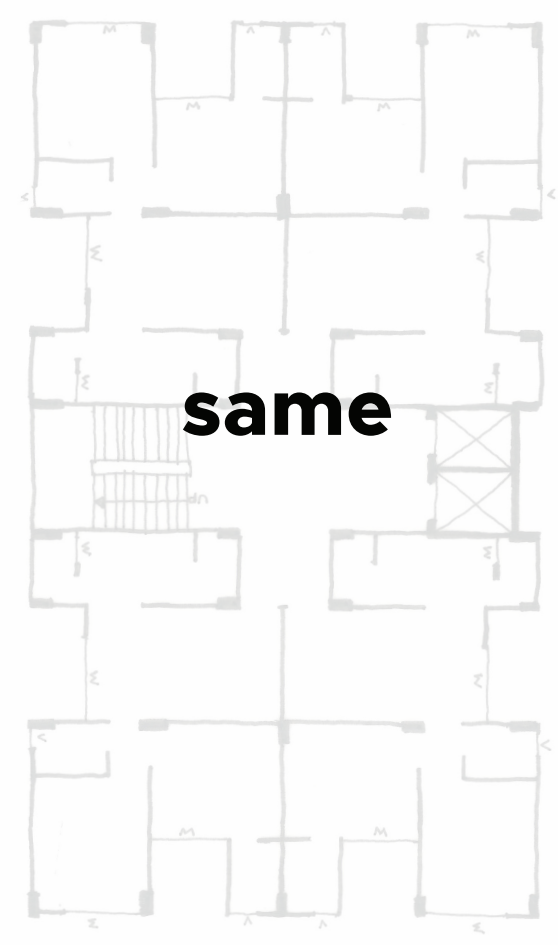
- *Are you, in all aspects, satisfied for the spaces provided in your house by the developer?*
 - *Do you feel your house will require alterations over a span of few years?*
 - *With a dynamic lifestyle, is the static nature of the house enough?*



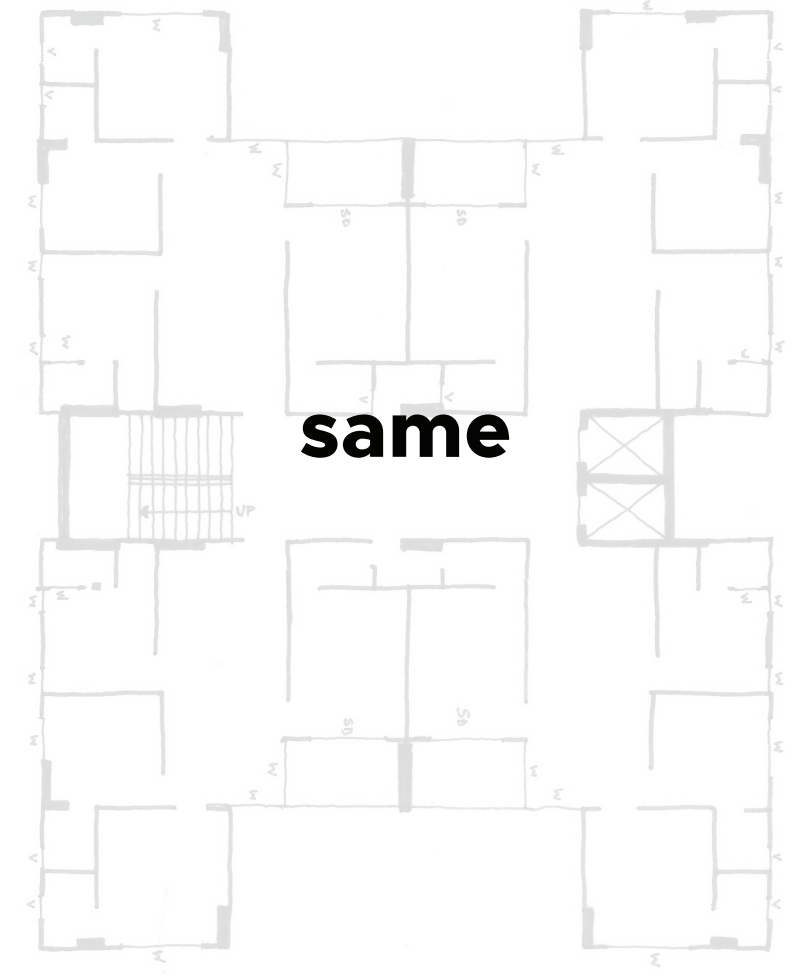
25+ years from now



same



same

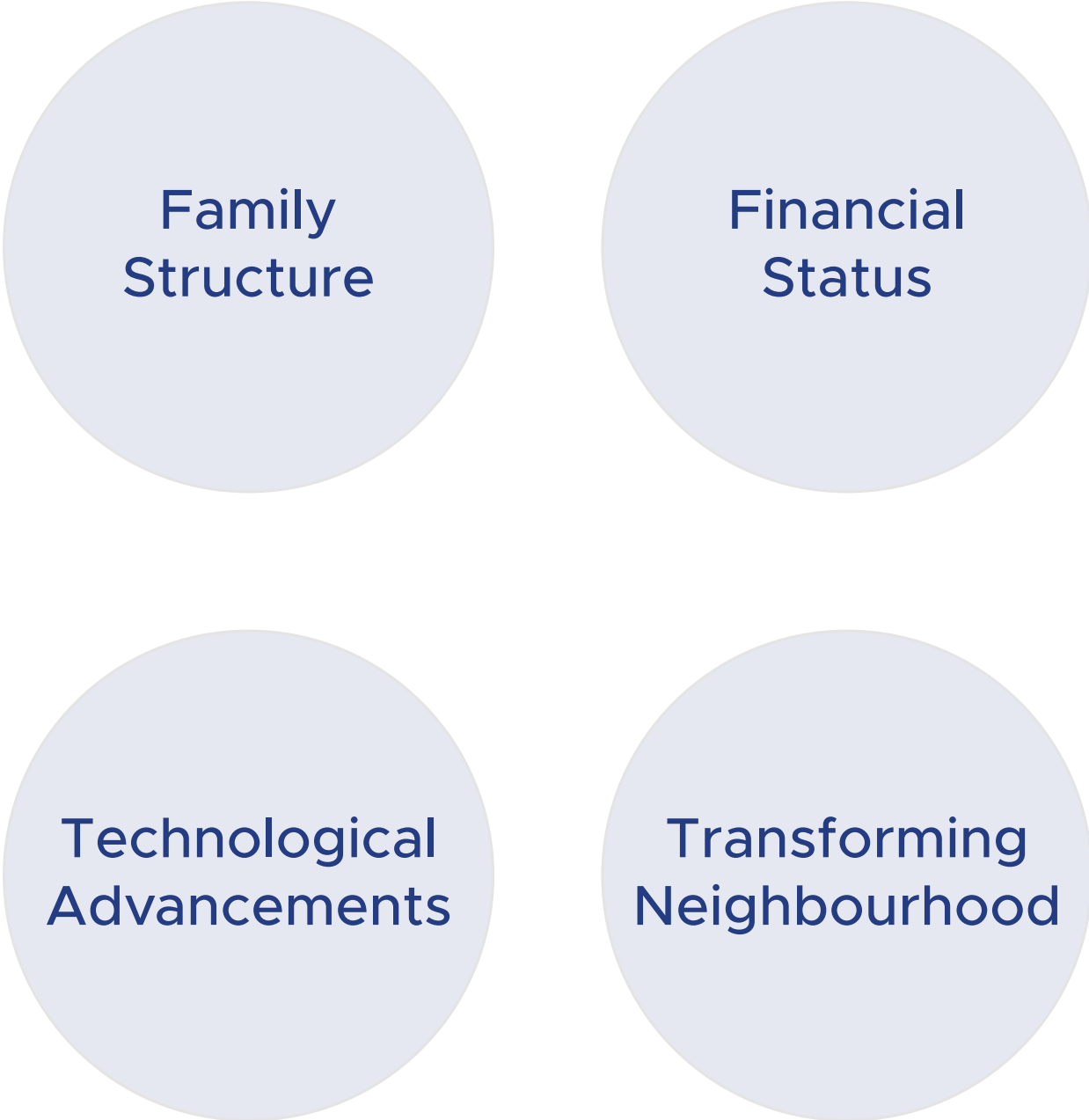


same

But do our houses really allow for the possibility of change?

What demands these changes?

What demands these changes?



Family
Structure

Financial
Status

Technological
Advancements

Transforming
Neighbourhood

What demands these changes?

Current condition of mass- housing

Family
Structure

Financial
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Technological
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What demands these changes?

Family
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Current condition of mass- housing

Monotonous

Insensitive to
dwellers

Standardised
mode of
production

Search of an
ideal plan

What demands these changes?

Current condition of mass- housing

Family
Structure

Financial
Status

Monotonous

Insensitive to
dwellers

***But how have dwellers
achieved desired changes
even in these existing
conditions of housing ?***

Technological
Advancements

Transforming
Neighbourhood

Standardised
mode of
production

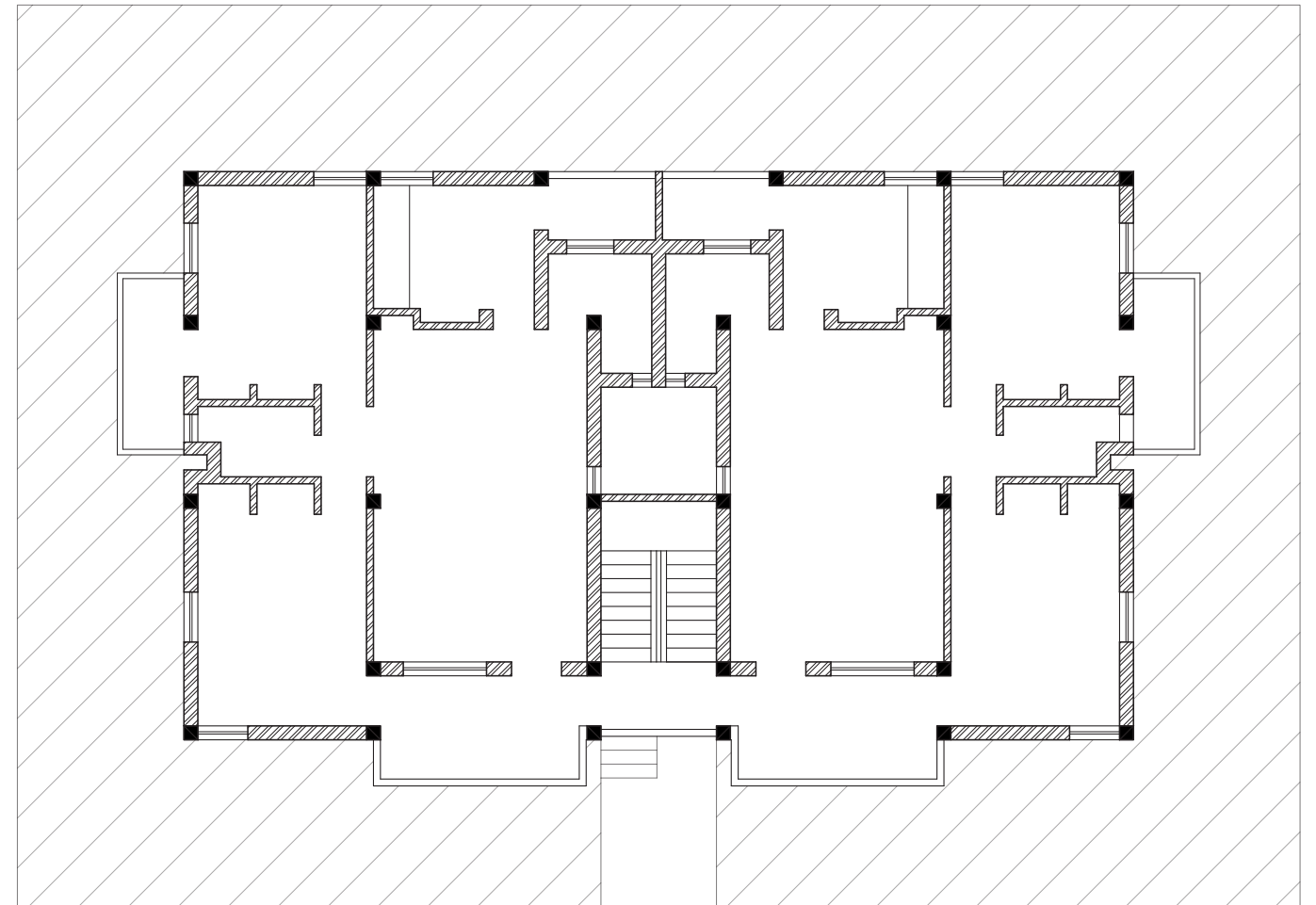
Search of an
ideal plan

Case of Shashtrinagar



Street View

Shashtrinagar, Ahmedabad



Typical Block Plan

Shashtrinagr, Ahmedabad

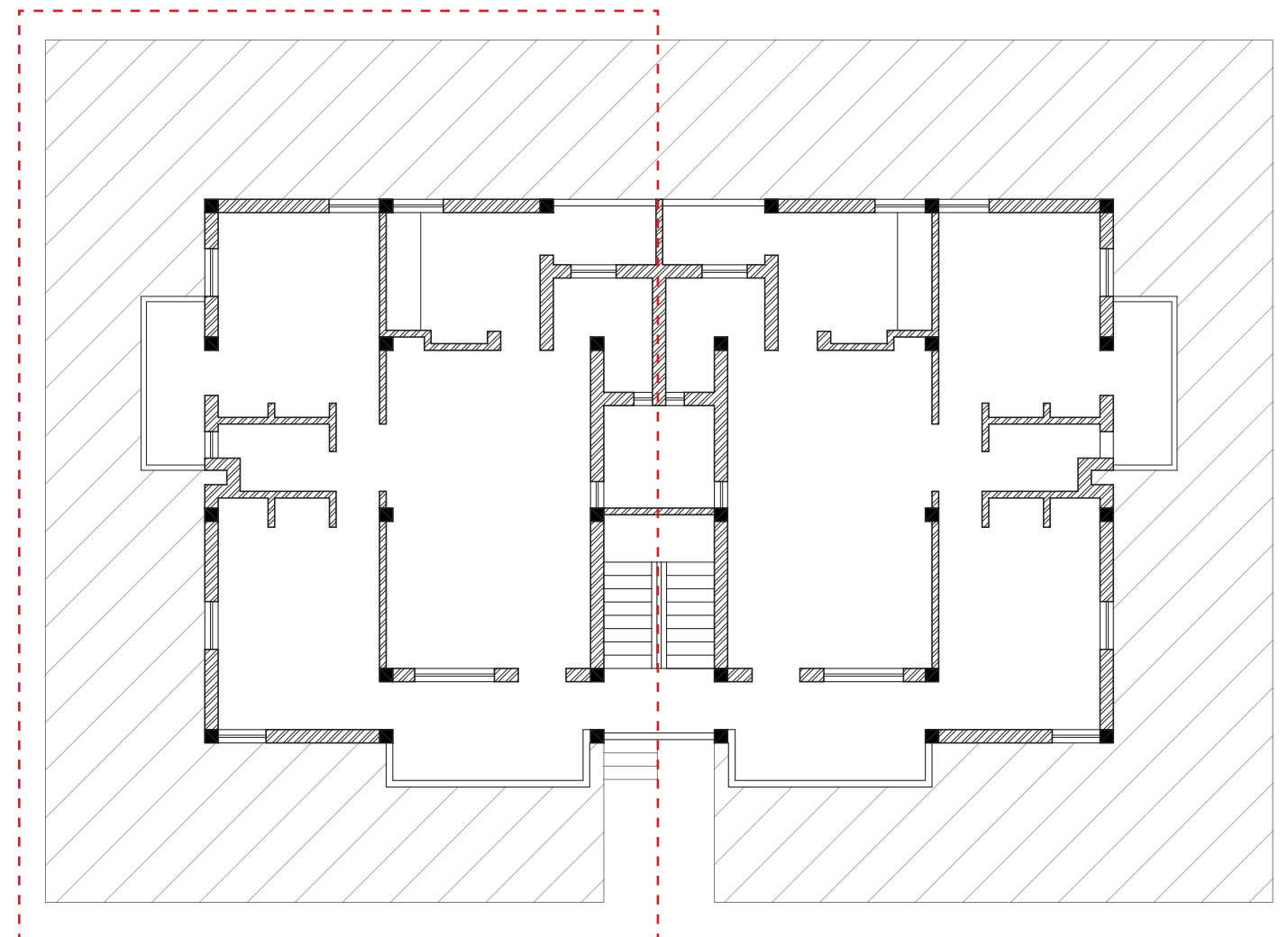
Building Information

Architects: Gujarat Housing Board, Ahmedabad

Year of Construction: 1976

Structural System: R.C.C. frame structure with brick infill walls

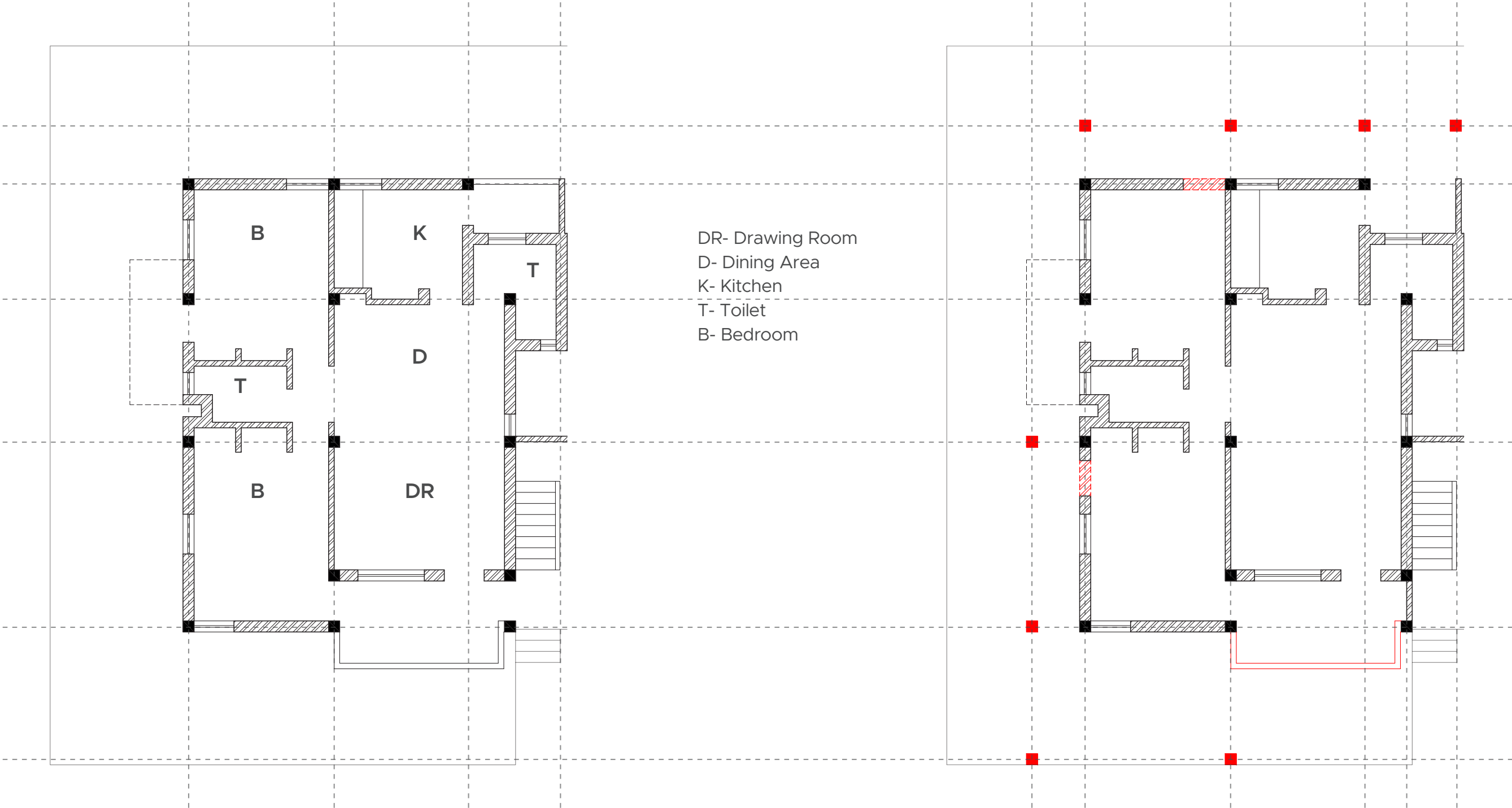
Built-up Area: 87.83 sq mt.



Typical Block Plan

Shashtrinagr, Ahmedabad

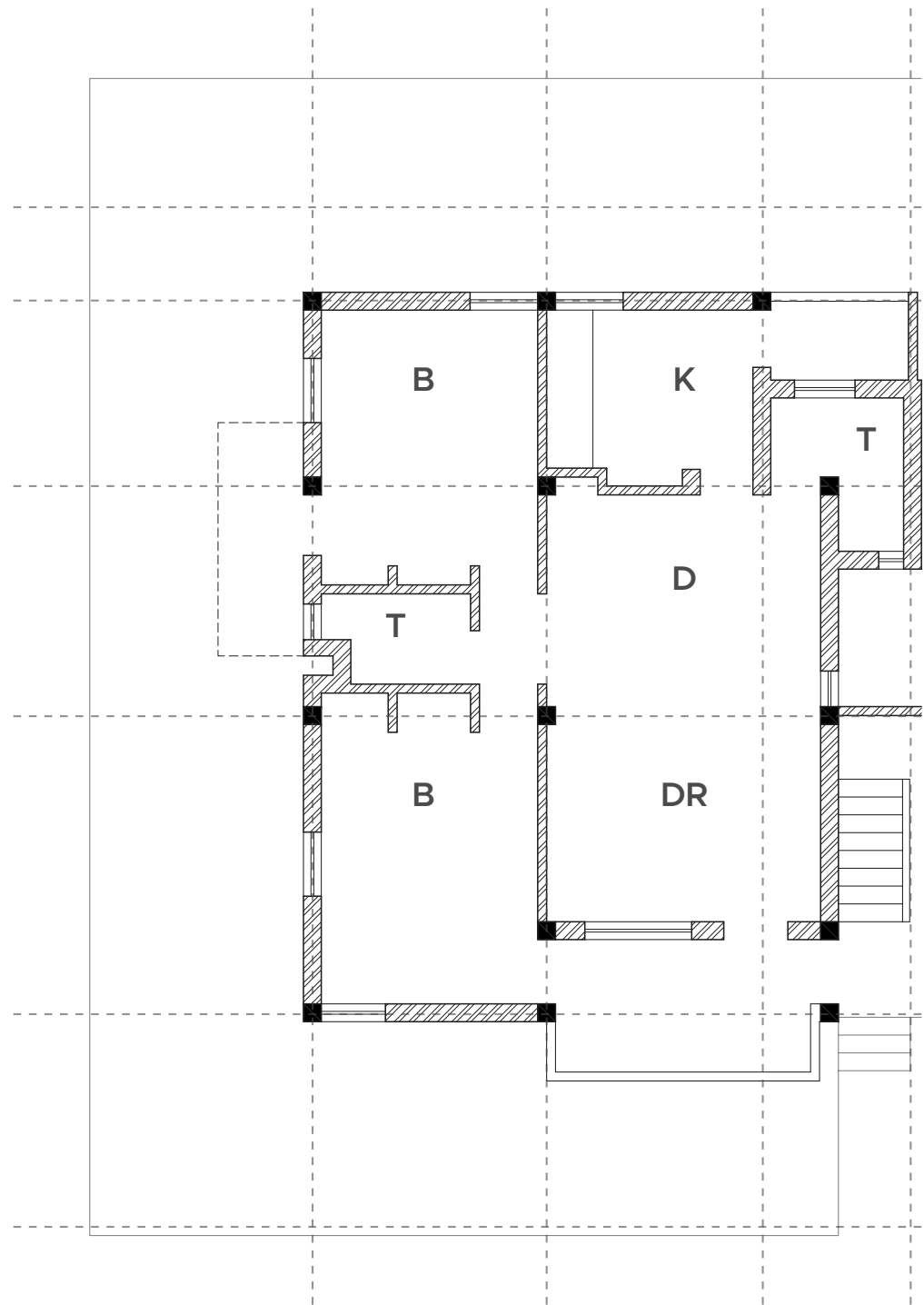
Shashtrinagar House no - 1



Existing Unit

Added Supports

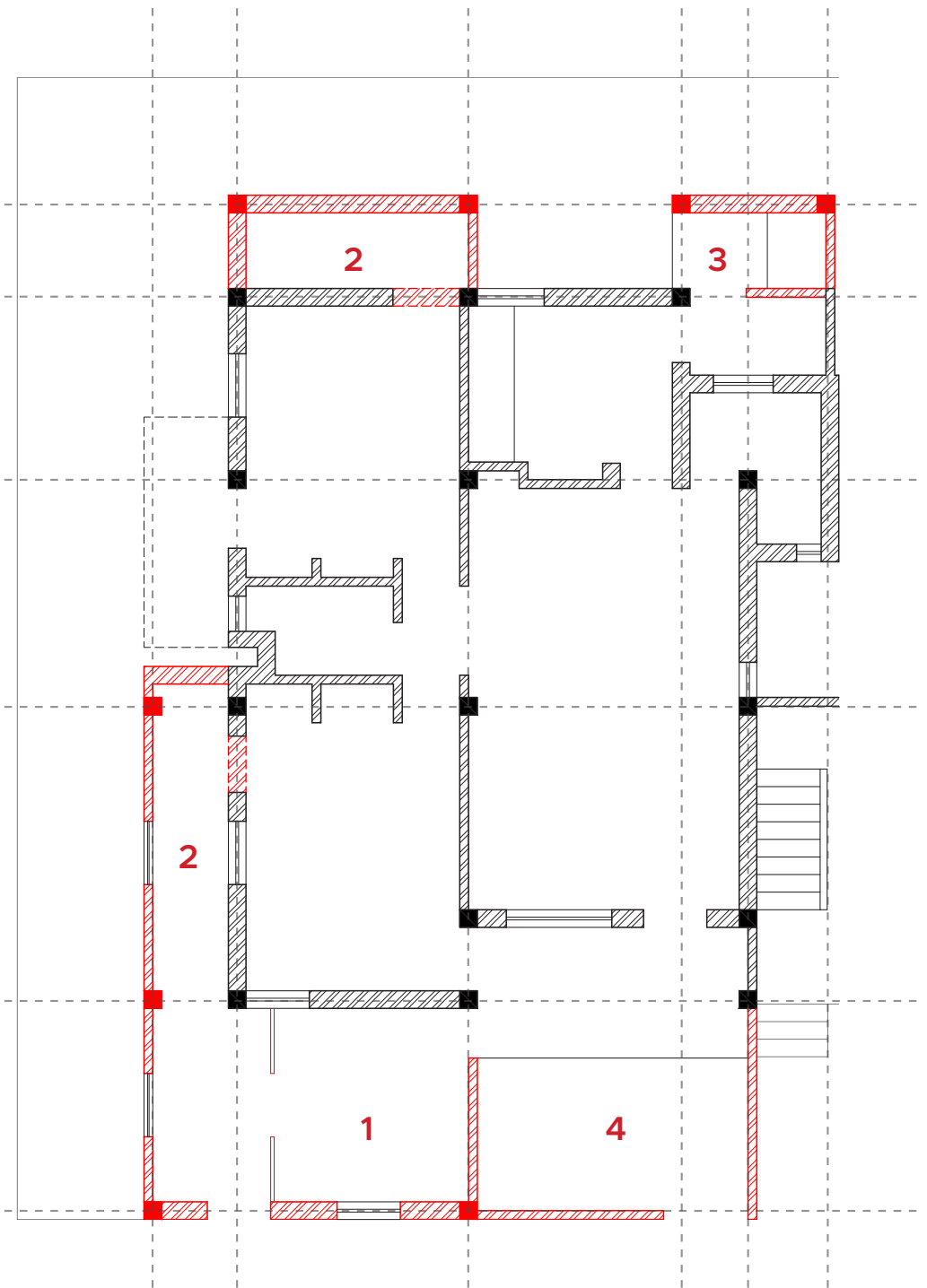
- New columns are added following the existing grid pattern.



DR- Drawing Room
 D- Dining Area
 K- Kitchen
 T- Toilet
 B- Bedroom

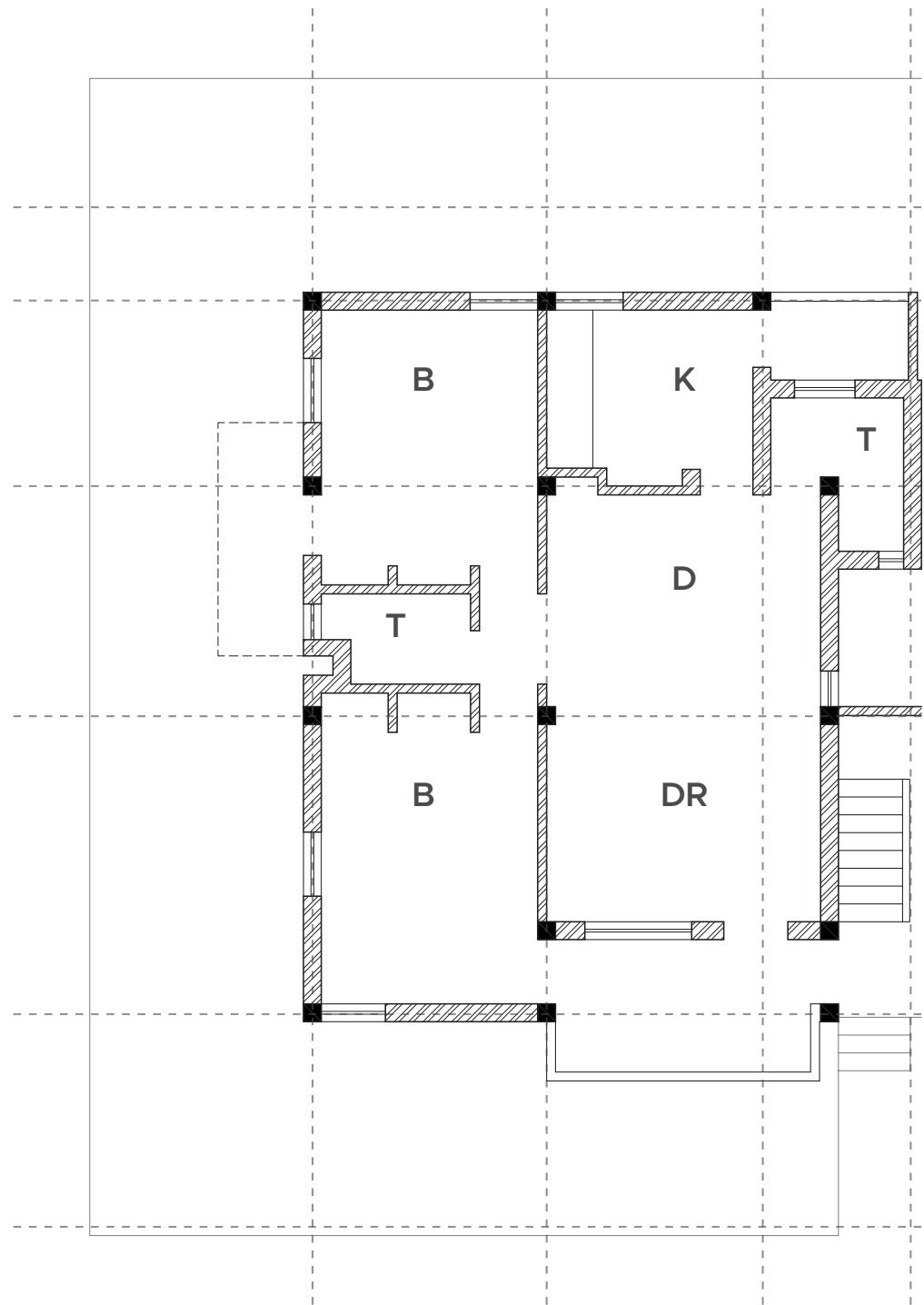
1- Room in frontyard
 2- Rear area in bedrooms
 3- Toilet
 4- Front verandah enclosed

Existing Unit



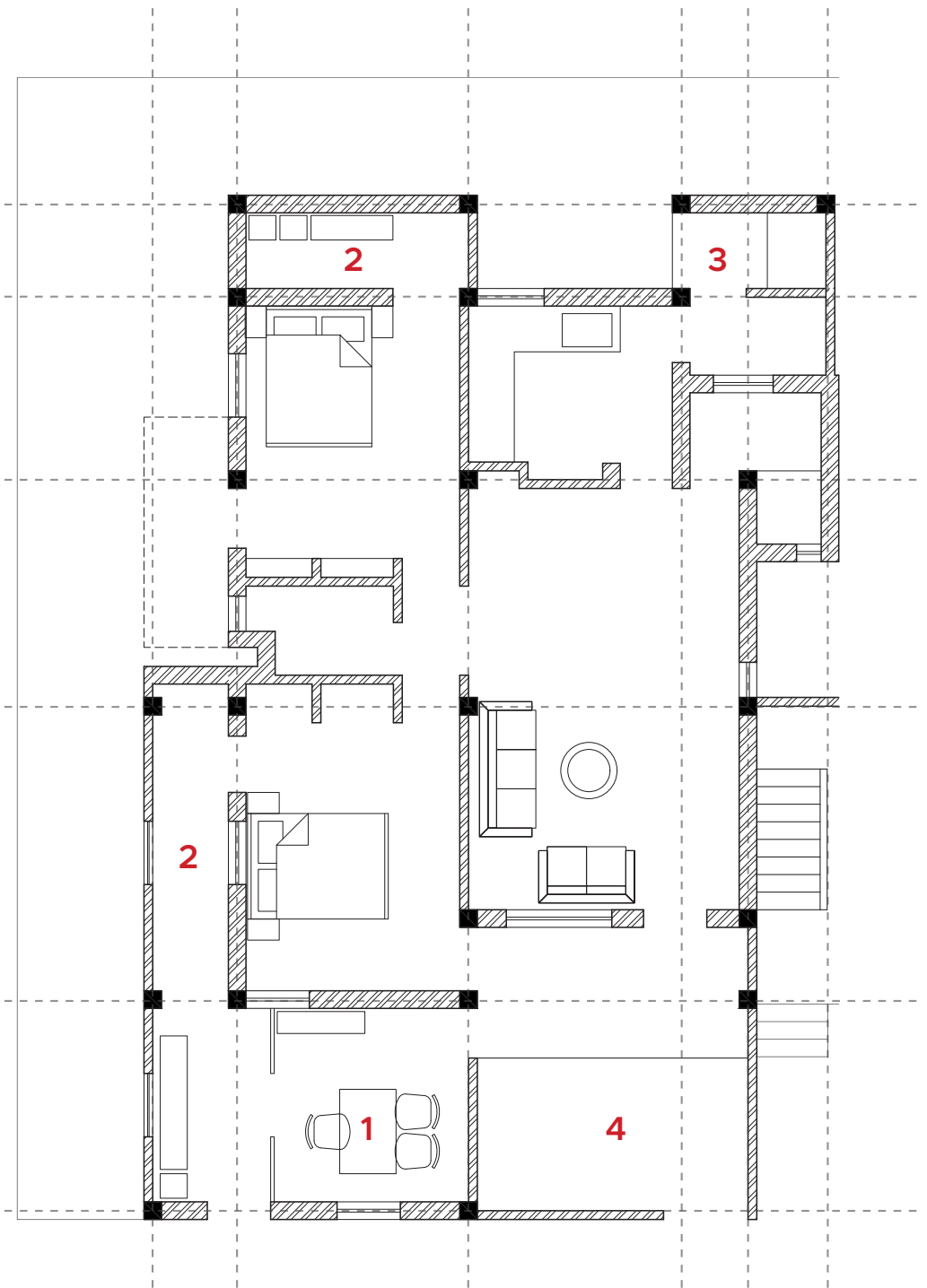
Added Infills

- Few interior walls (red dotted) are removed and new walls (red solid) are added according to the desired change.



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Existing Unit

Unit Plan after Changes

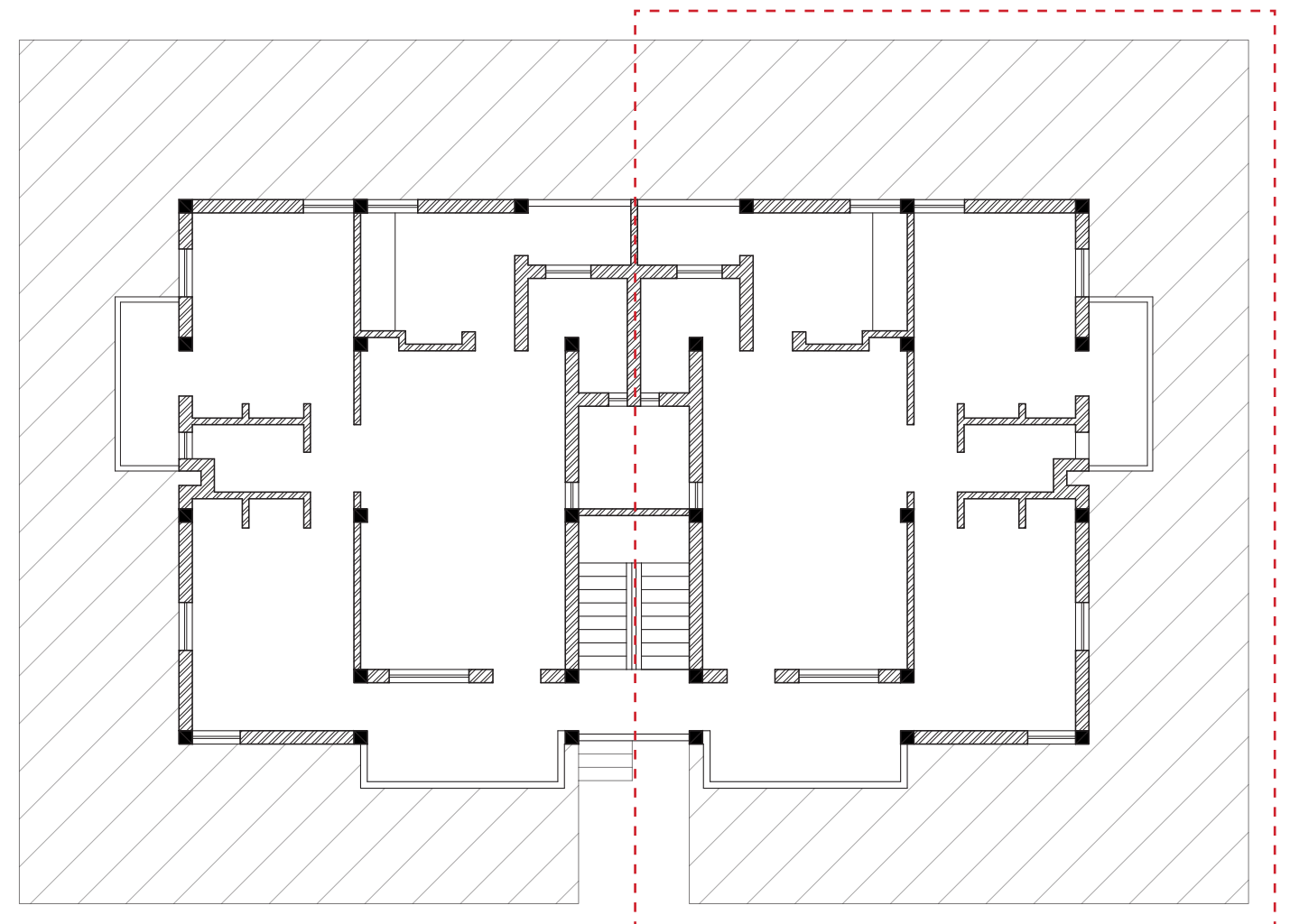
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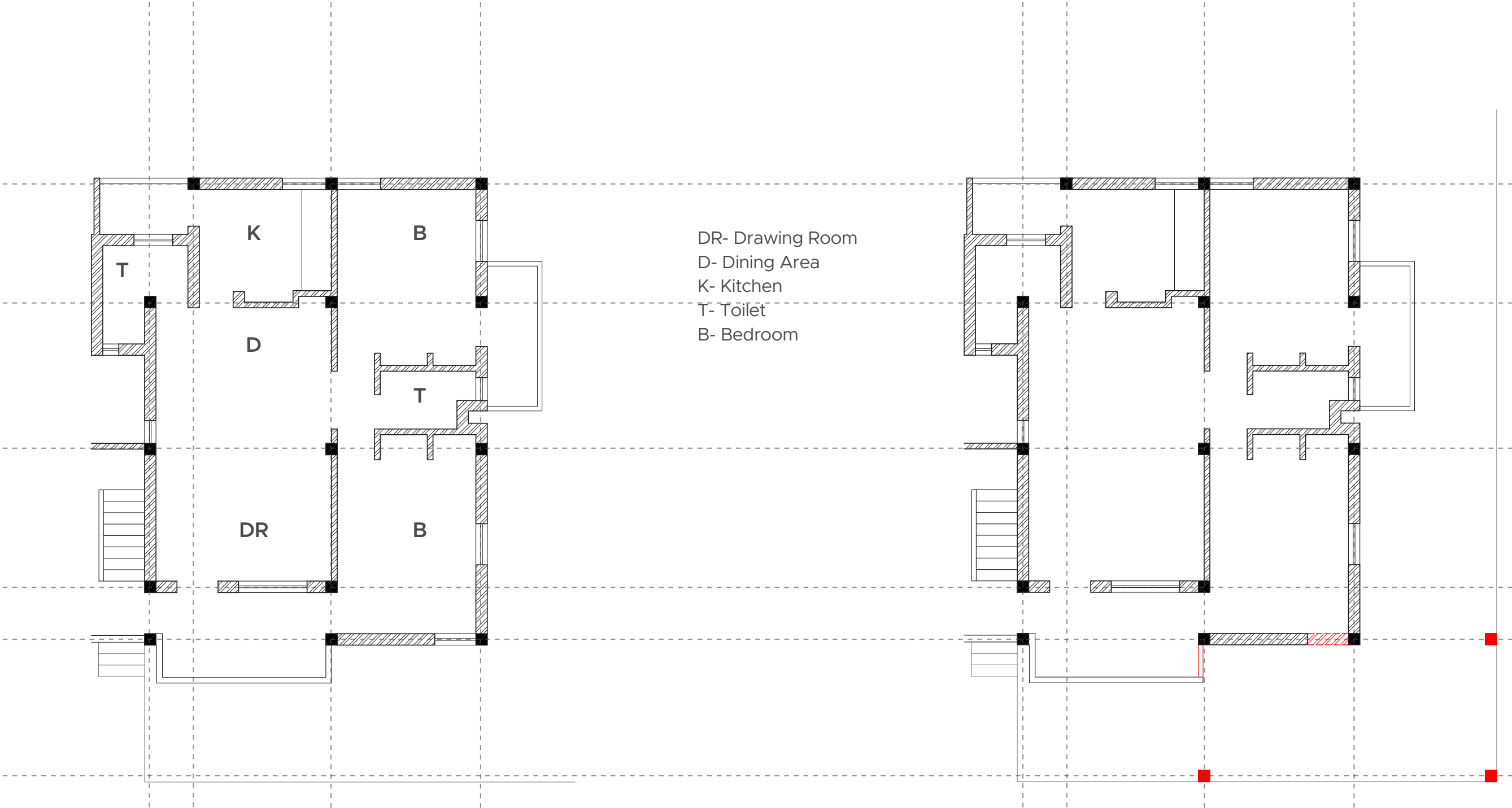
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Typical Block Plan

Shashtrinagr, Ahmedabad

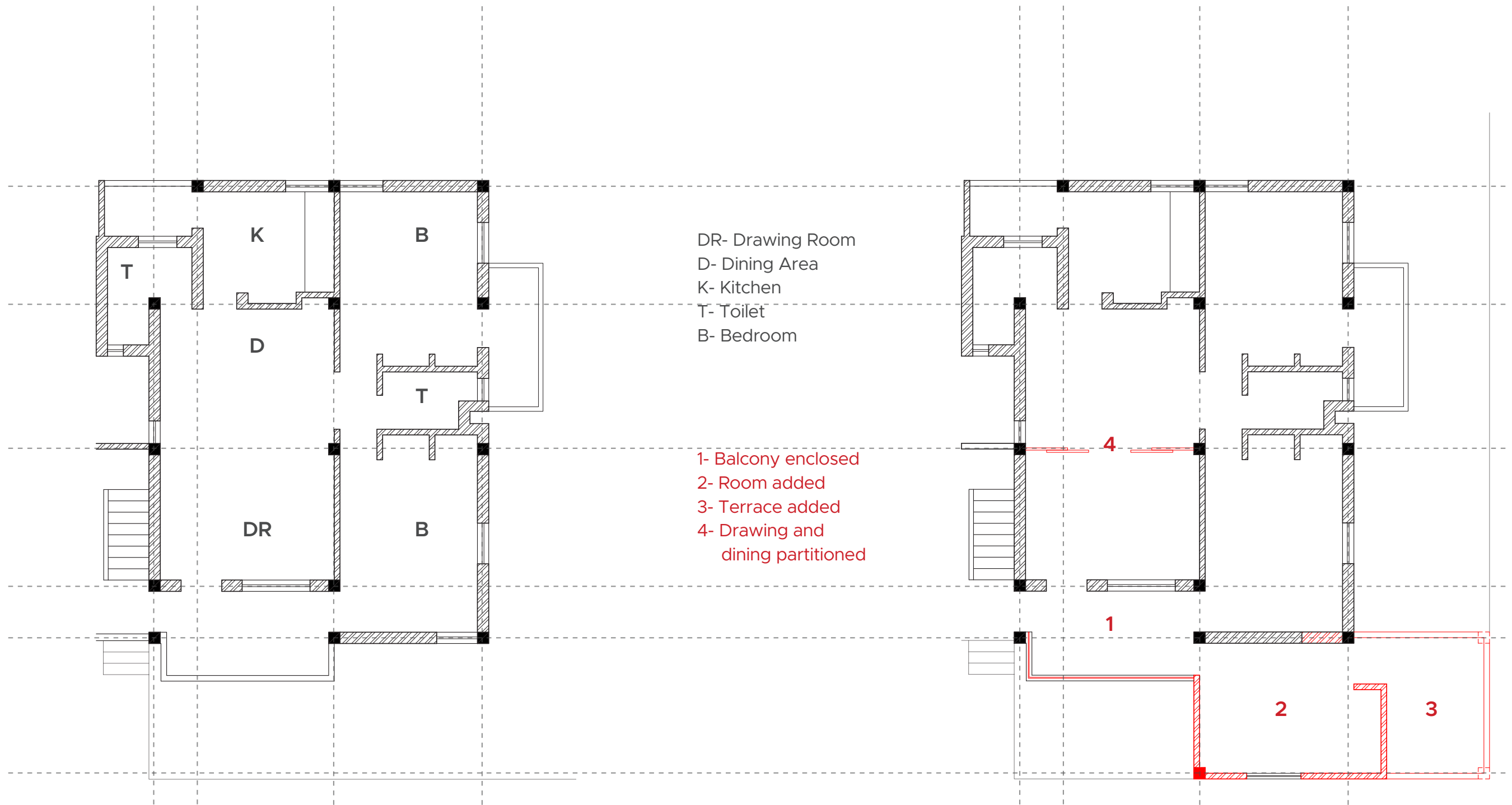
Shashtrinagar House no - 2



Existing Unit

Added Supports

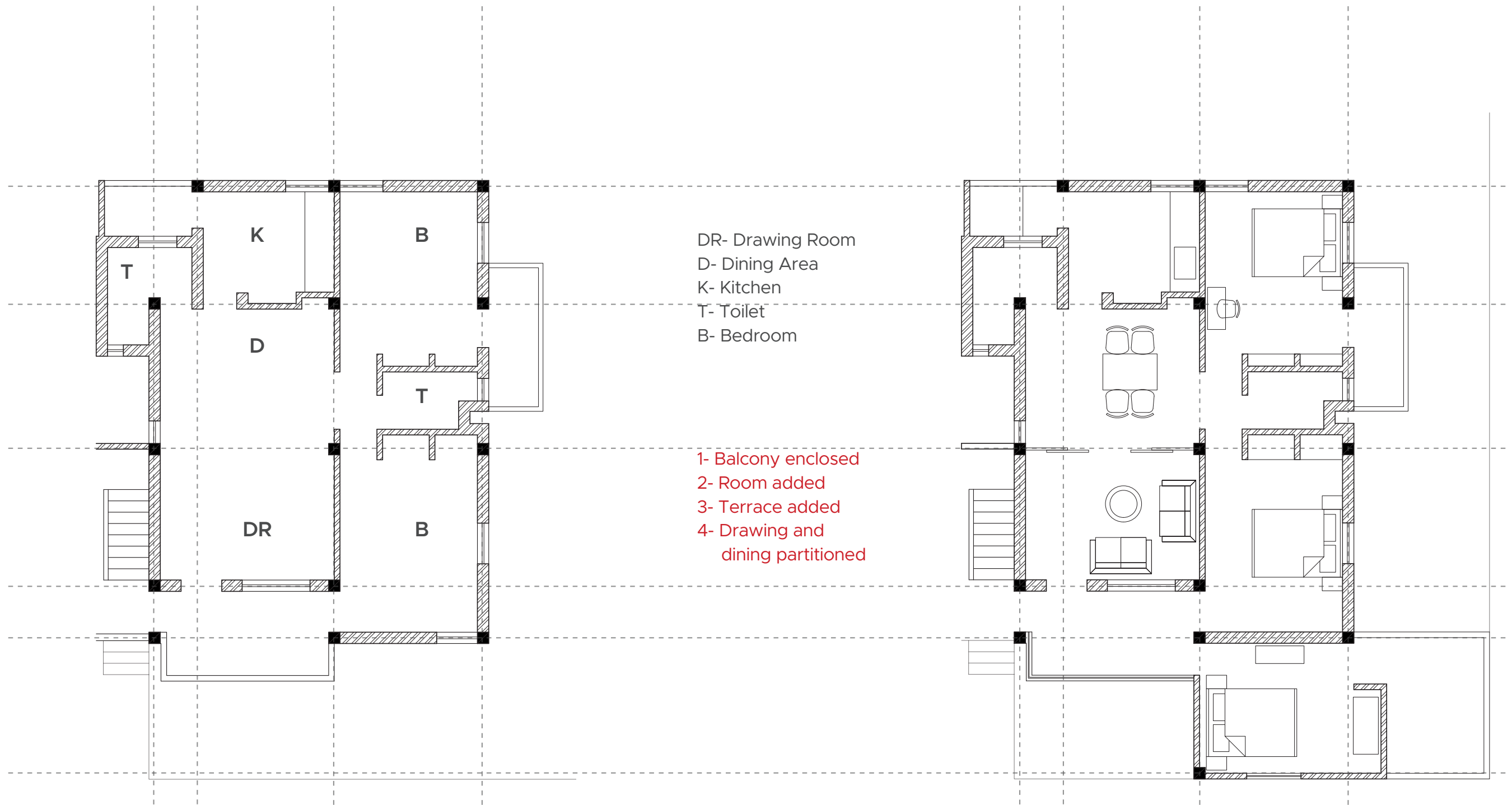
- New columns are added following the existing grid pattern.



Existing Unit

Added Infills

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Existing Unit

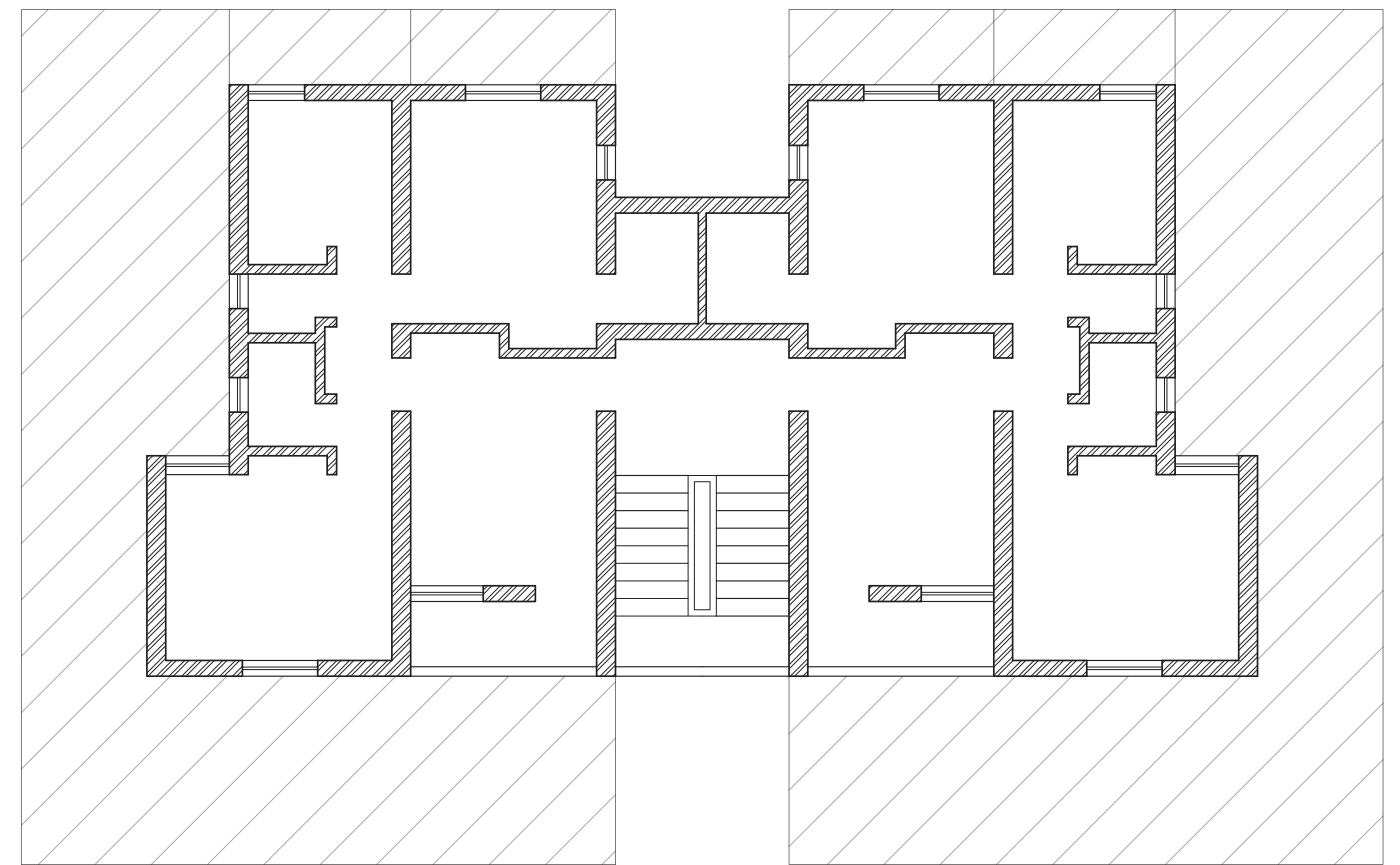
Unit Plan after Changes

Case of Sola Road



Street View

Pushpak Apartments, Sola Road, Ahmedabad



Typical Block Plan

Pushpak Apartments, Sola Road, Ahmedabad

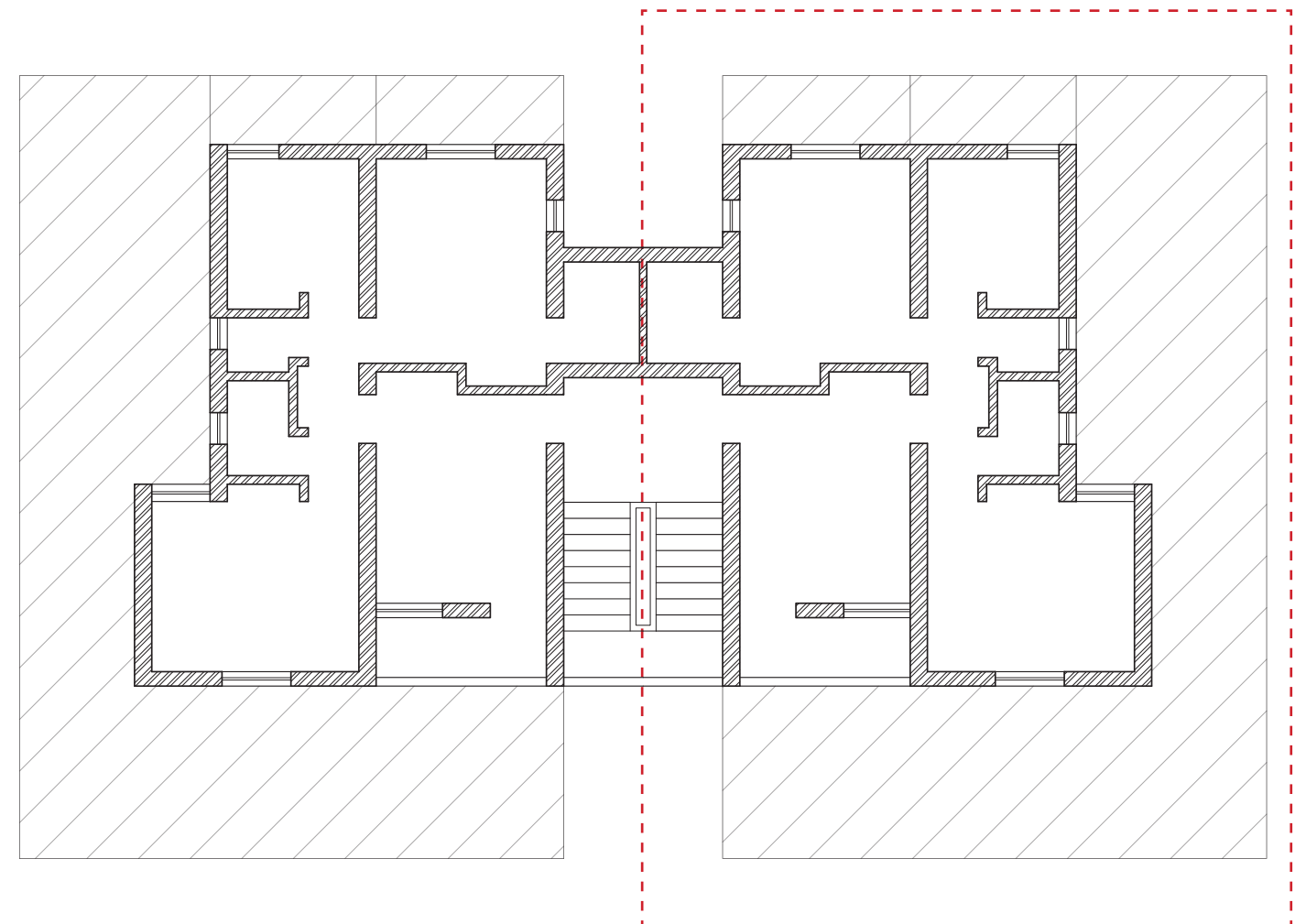
Building Information

Architects: Gujarat Housing Board, Ahmedabad

Year of Construction: 1987

Structural System: Load Bearing Walls with R.C.C. Slab

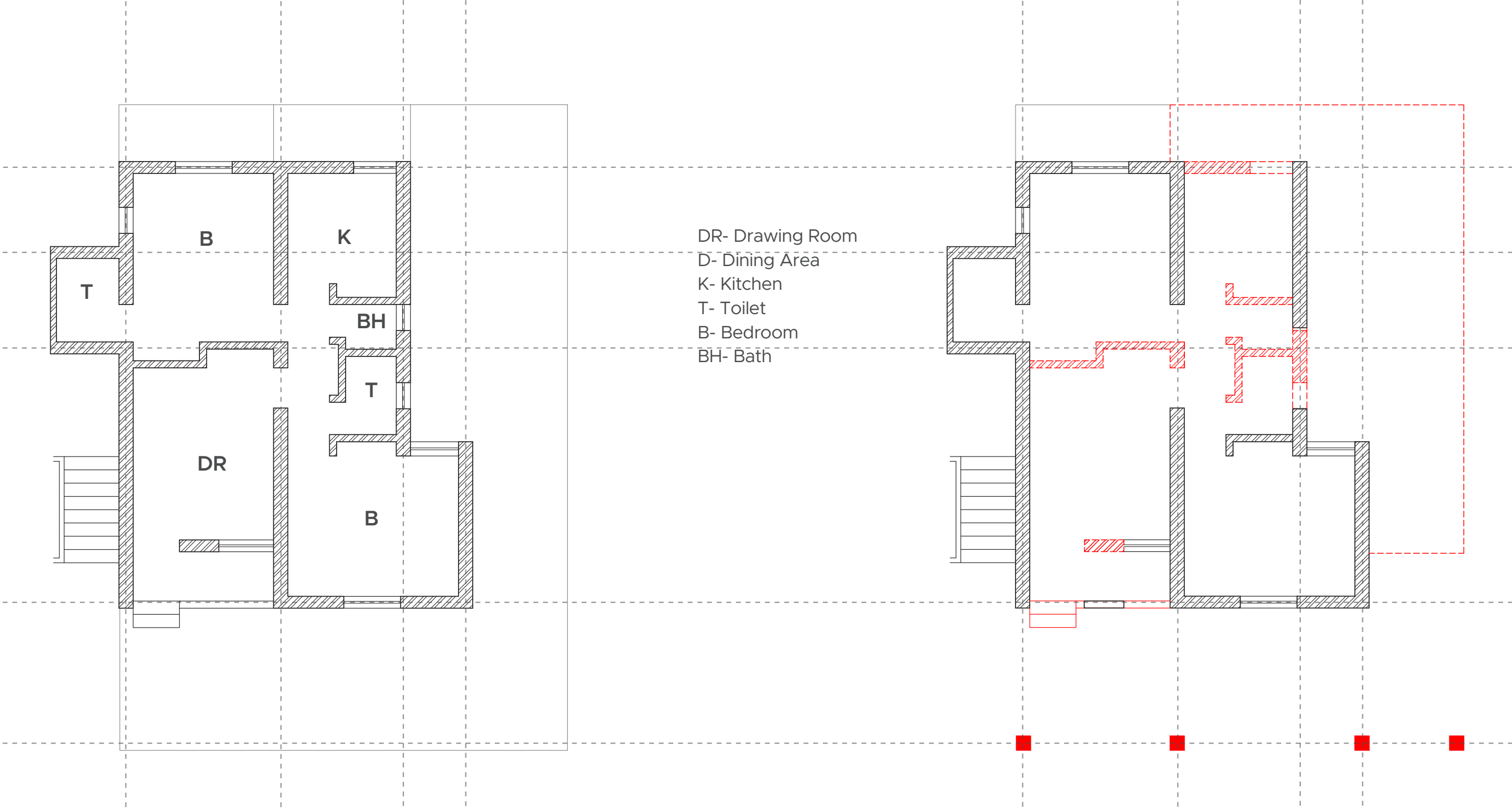
Apartment Type: Walk up apartments



Typical Block Plan

Pushpak Apartments, Sola Road, Ahmedabad

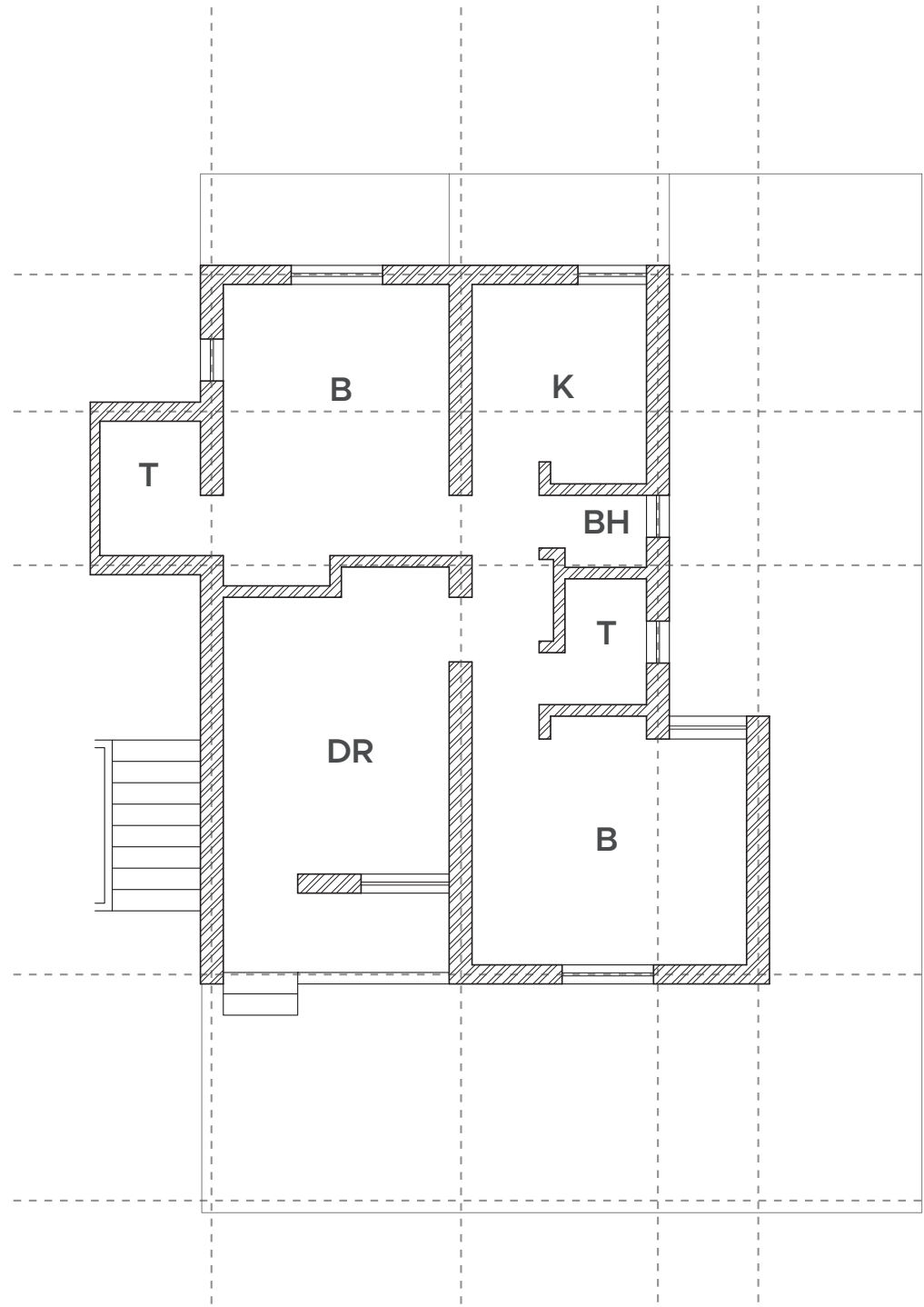
Sola Road House no - 1



Existing Unit

Added Supports

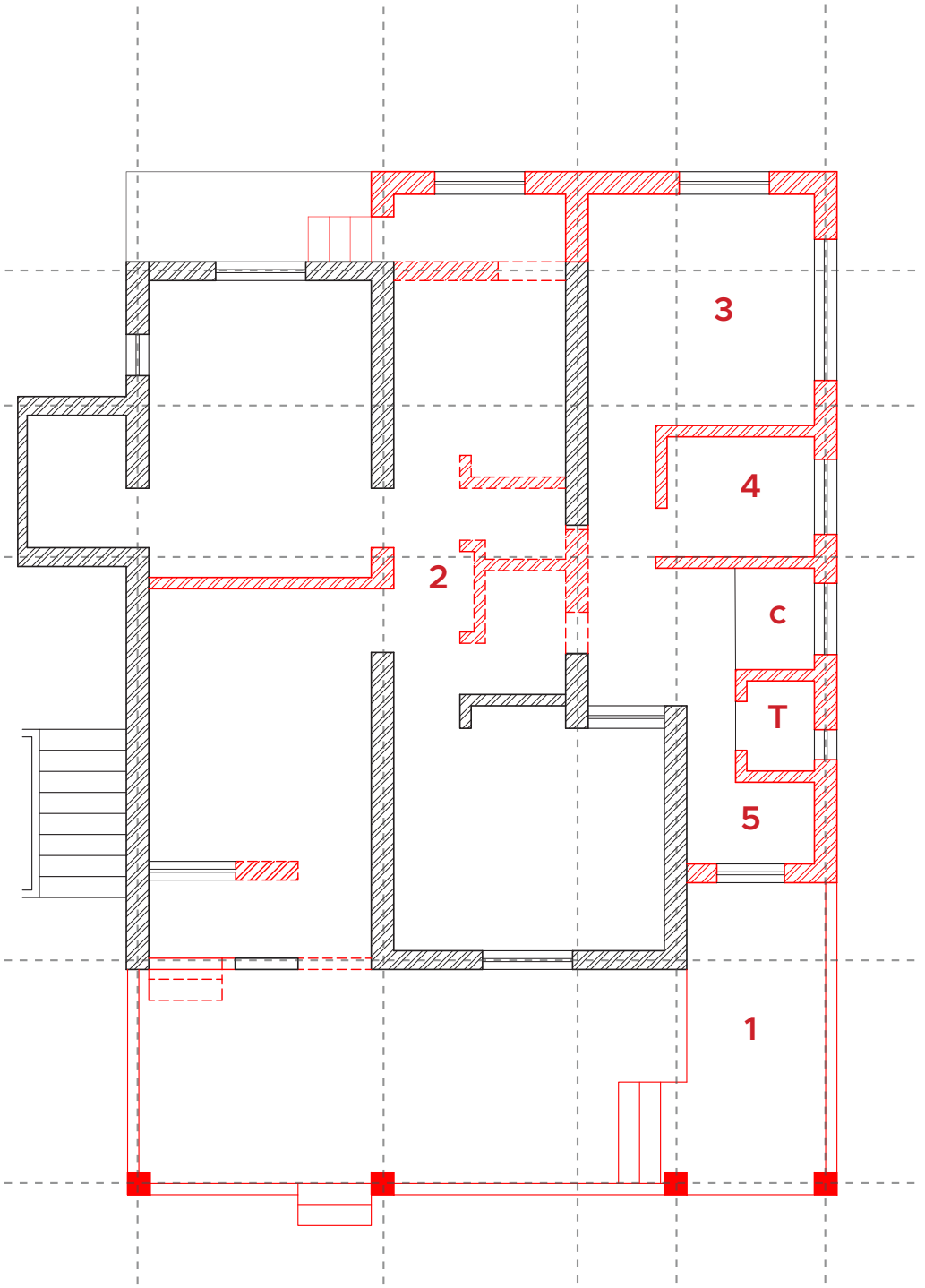
- New columns are added following the existing grid pattern.



Existing Unit

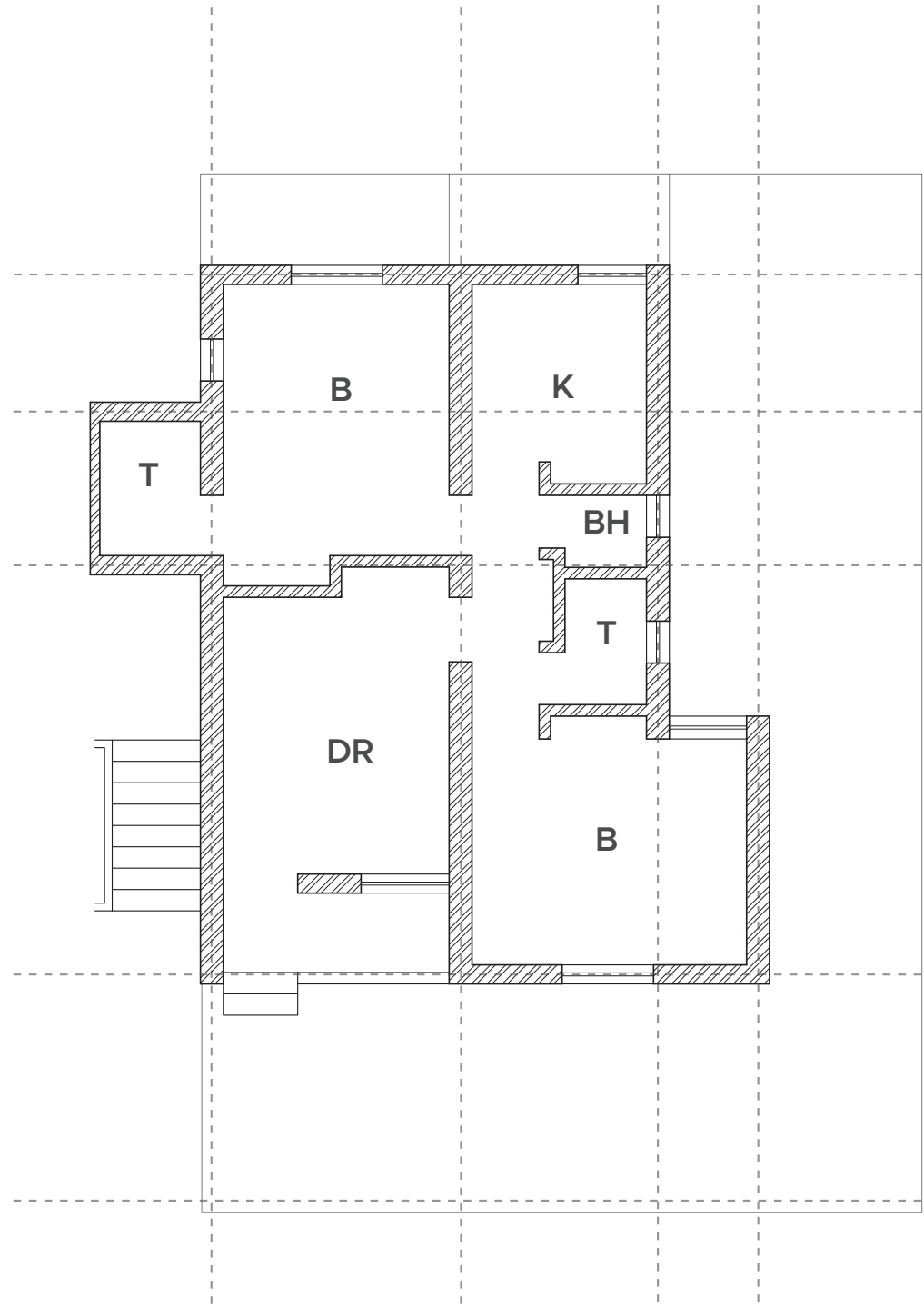
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 B- Bedroom
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1- Car park
 2- Dining
 3- Bedroom
 4- Toilet/ Bath
 5- Storage
 c- Chowkdi



Added Infills

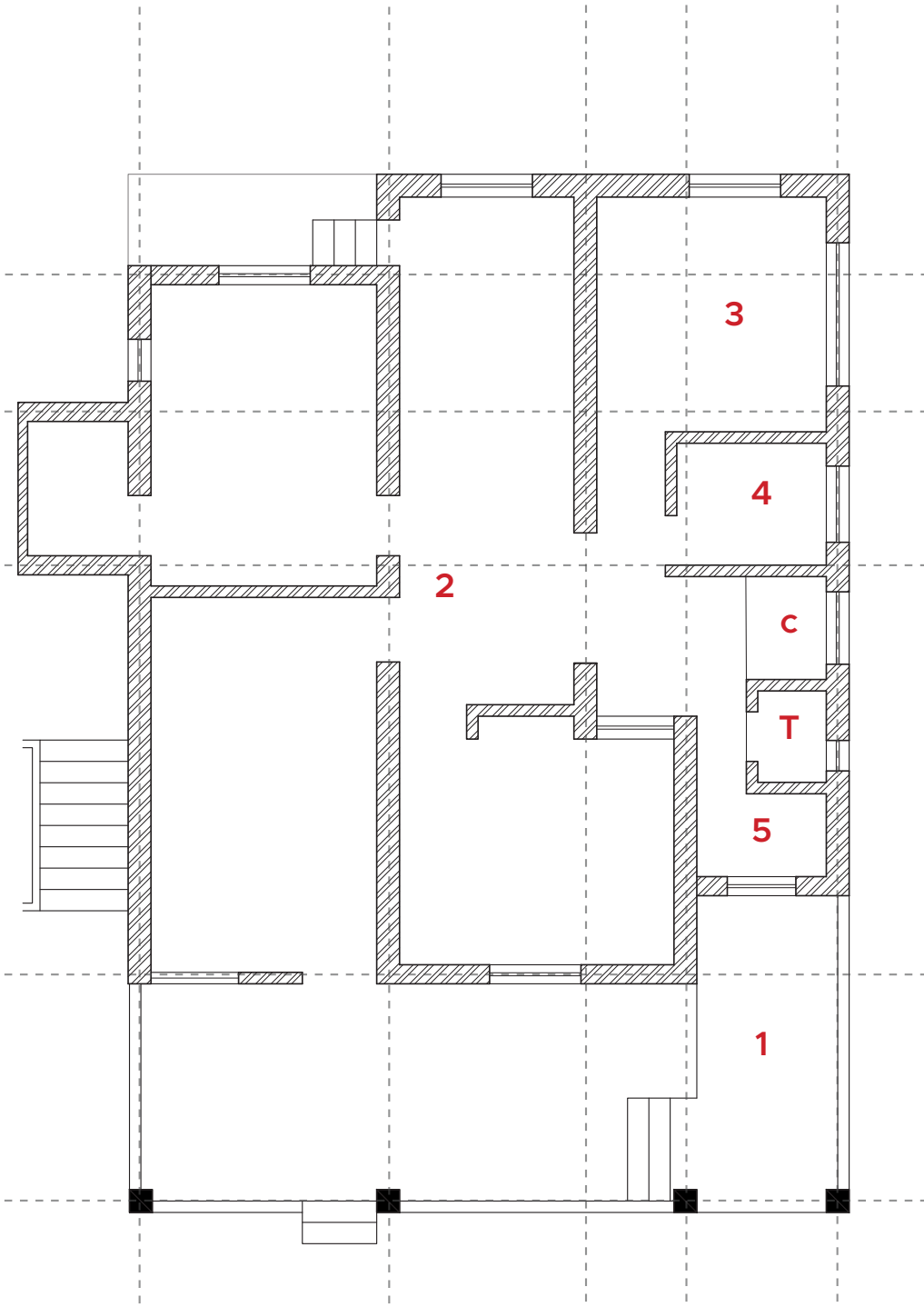
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Unit Plan after Changes

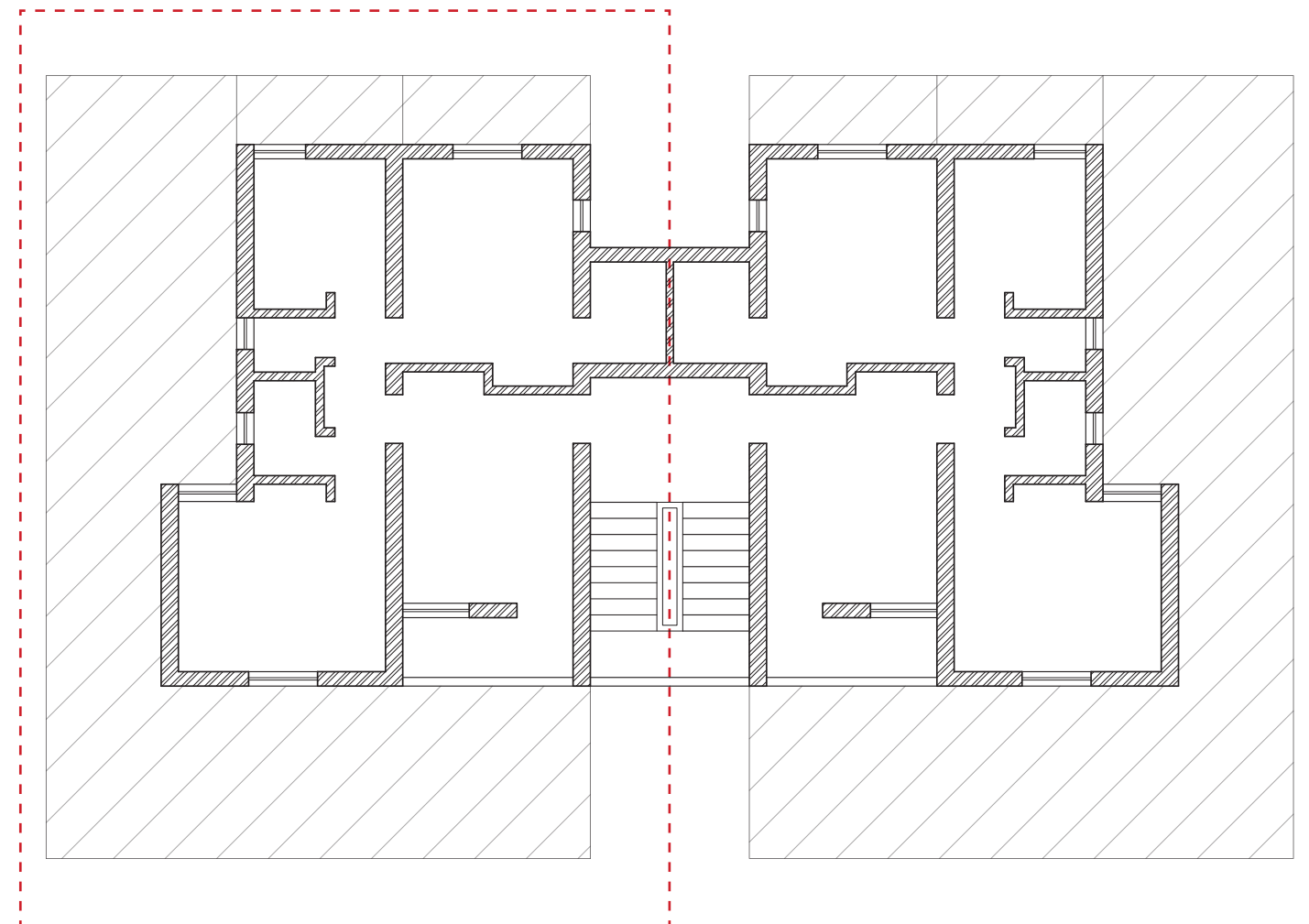
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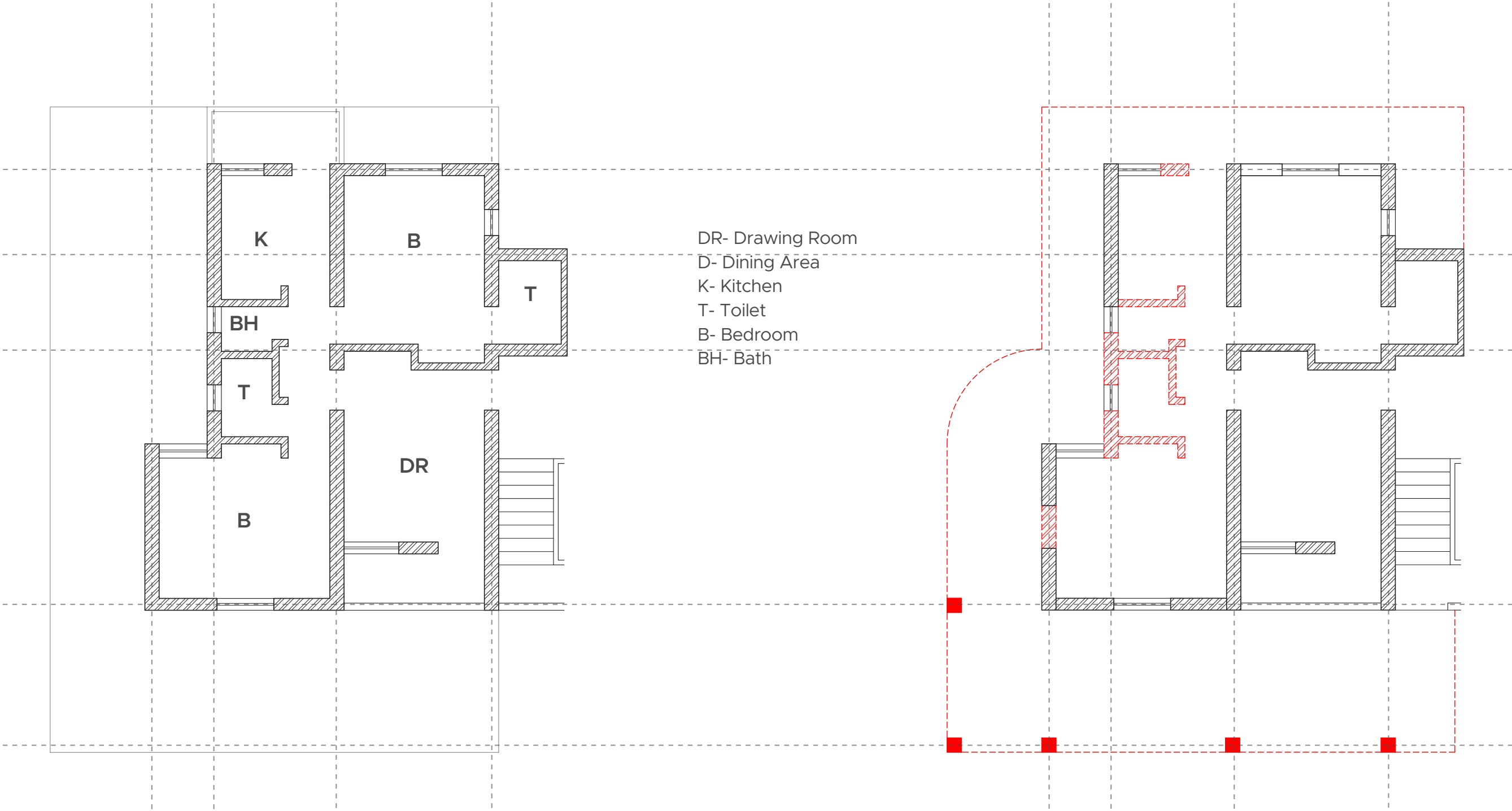
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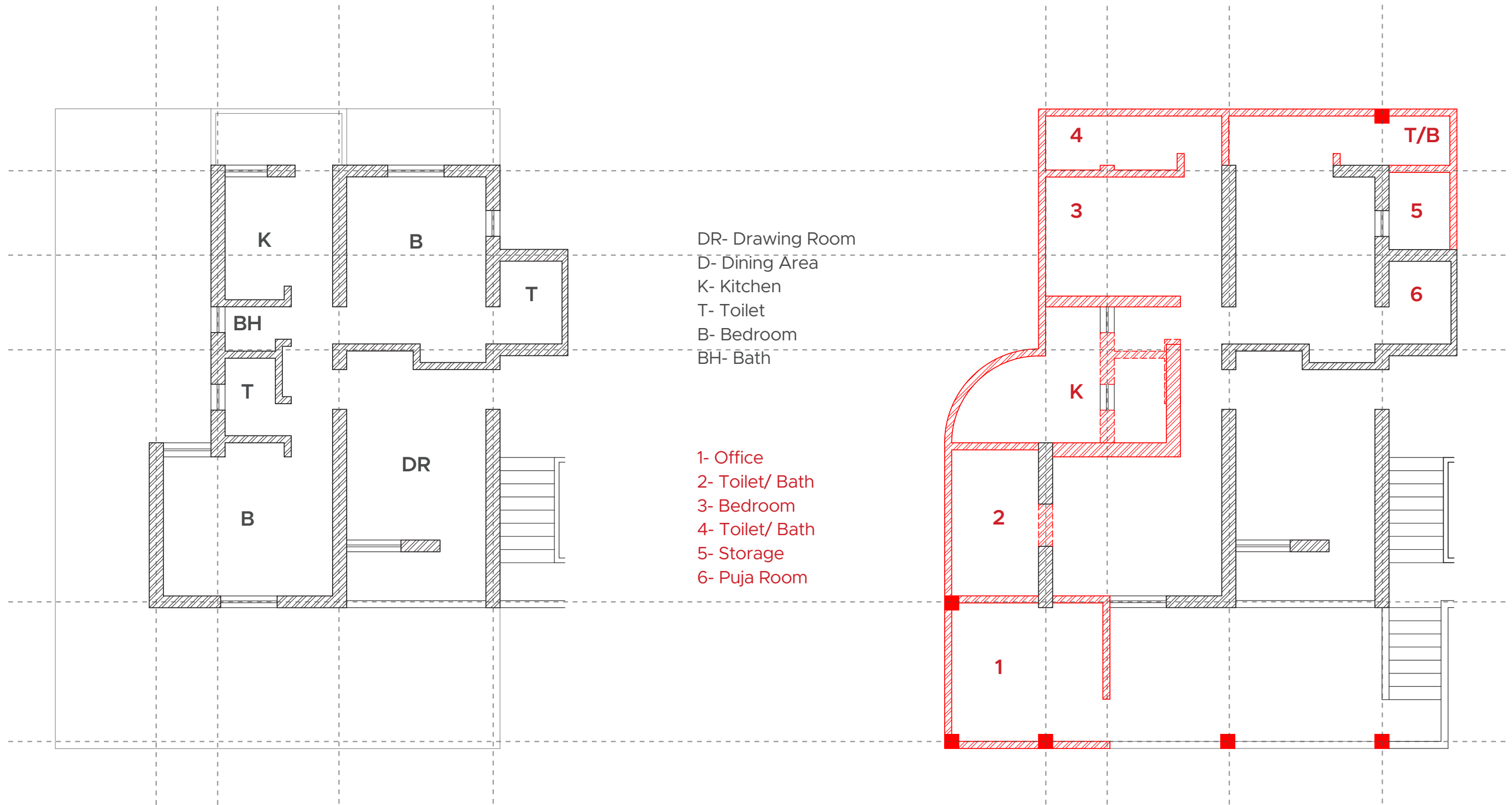
Sola Road House no - 2



Existing Unit

Added Supports

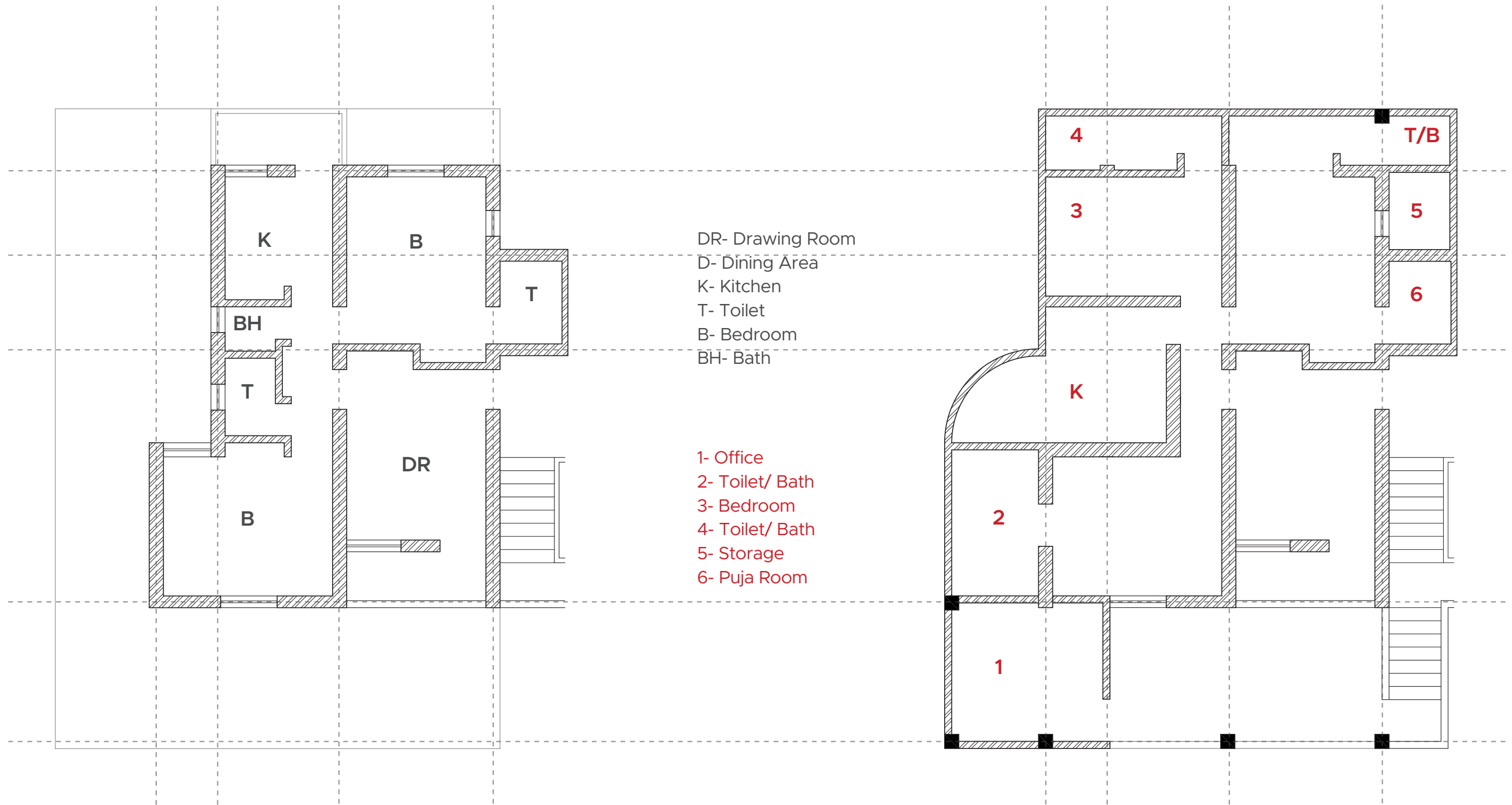
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Existing Unit

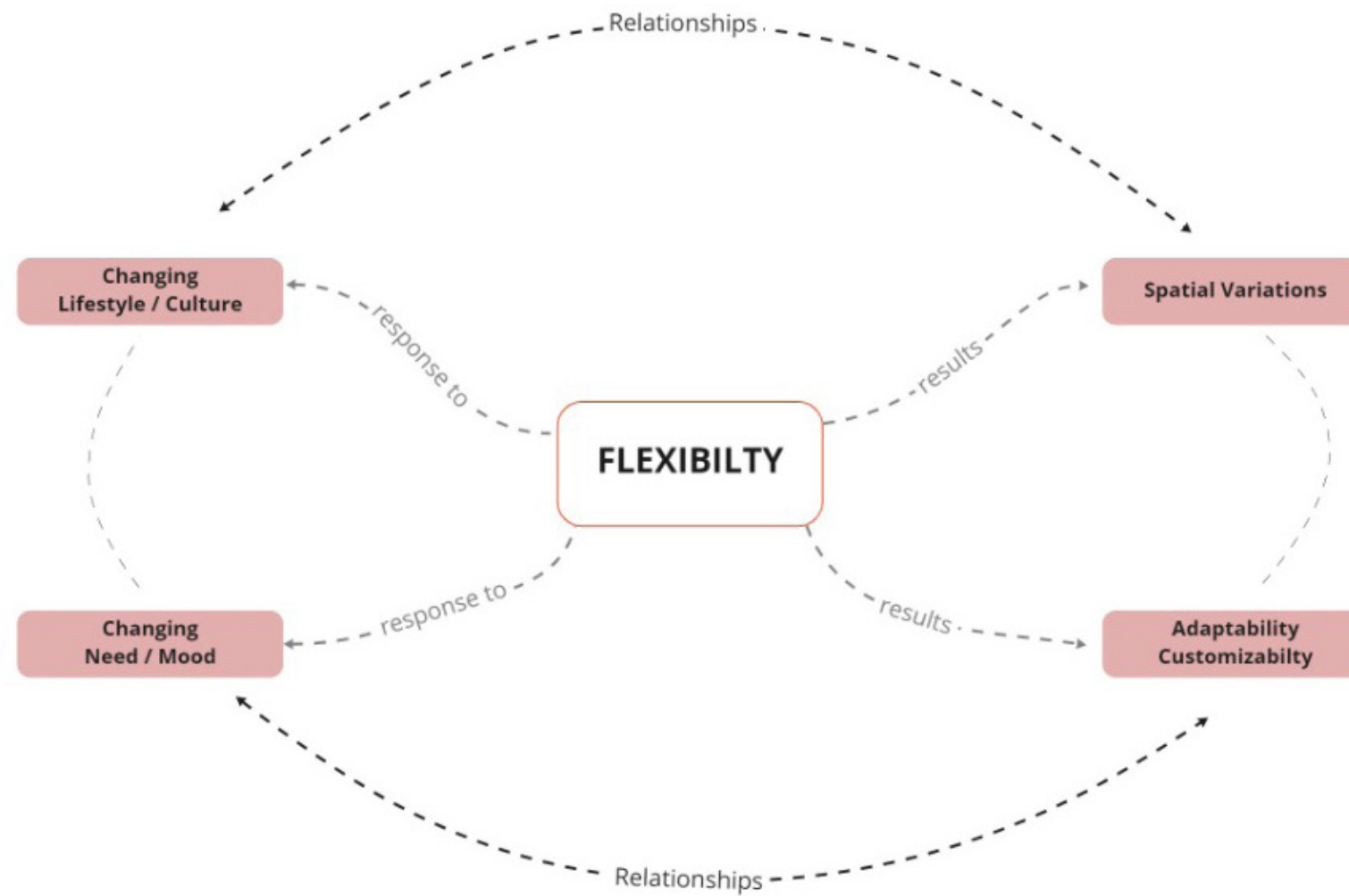
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Existing Unit

Unit Plan after Changes



Relationship between changing lifestyle/ culture, changing need, flexibility, spatial variations and adaptability

*“ Uniformity in **mass housing** is not due to the action of the machine, but due to the non-action of man.”*

According to Habraken,

- Autonomous, monumental buildings should make way for interwoven individual design units. Big projects can only exist as a structure of interwoven pieces where the user can shape and design their own settlement.

- Recognising that every user has different values and needs. It is impossible to find solution that fits everybody. A house being a personal thing, must adapt to the user.

Habraken's Theory



Standardised production of houses

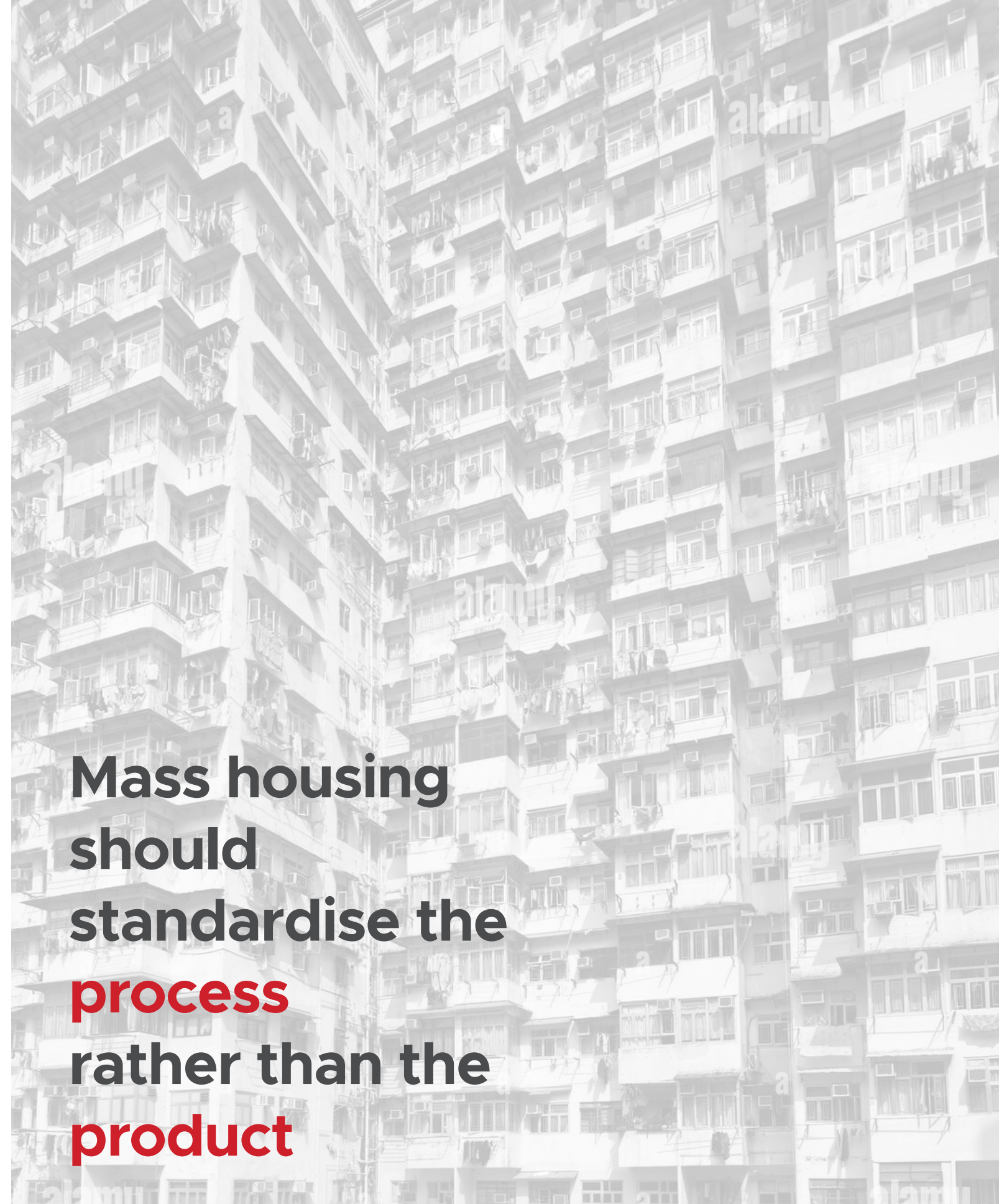
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Habraken's Theory



**Mass housing
should
standardise the
process
rather than the
product**

According to Habraken

The aim of his theory is to accommodate changing user needs in housing design. These user needs cannot be predicted accurately by the designer. Hence, the theory attempts to provide for the unforeseen rather than trying to predict it.

He proposed to separate the common static requirements from the unpredictable user needs. The common requirements are named the **'support systems'** and the individual needs are called the **'infill'**.

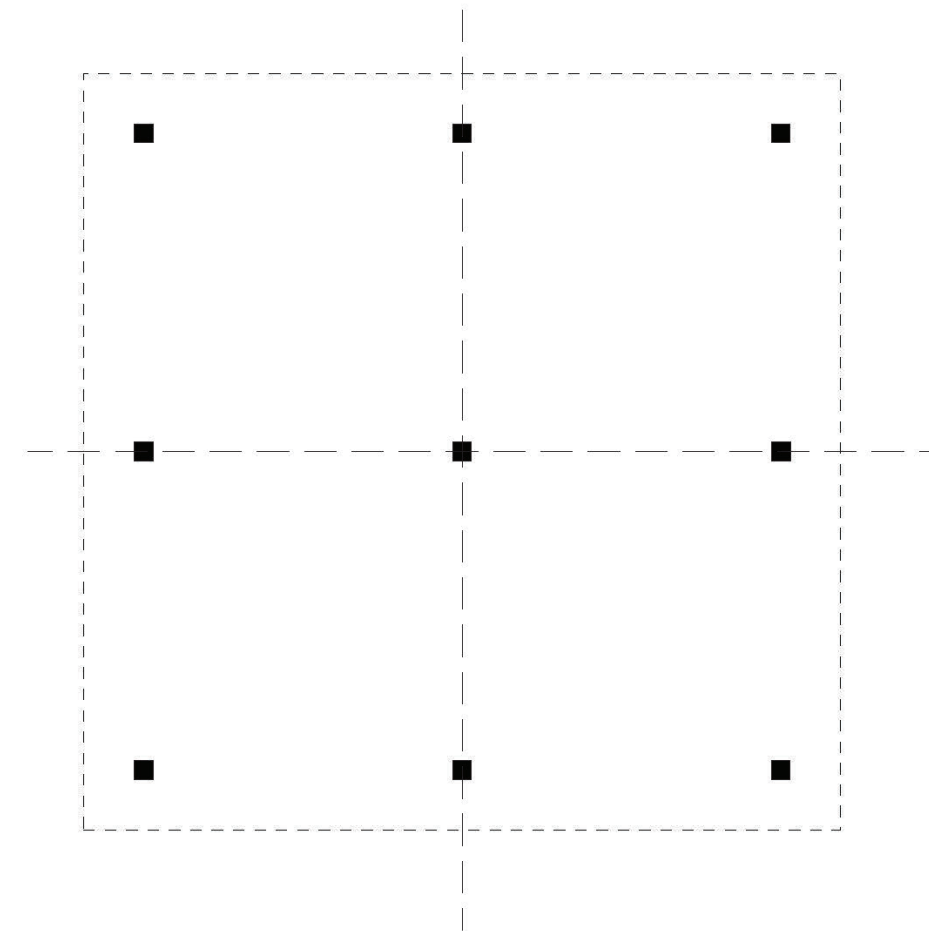
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A support structure consists of:

- Structure (columns, slabs)



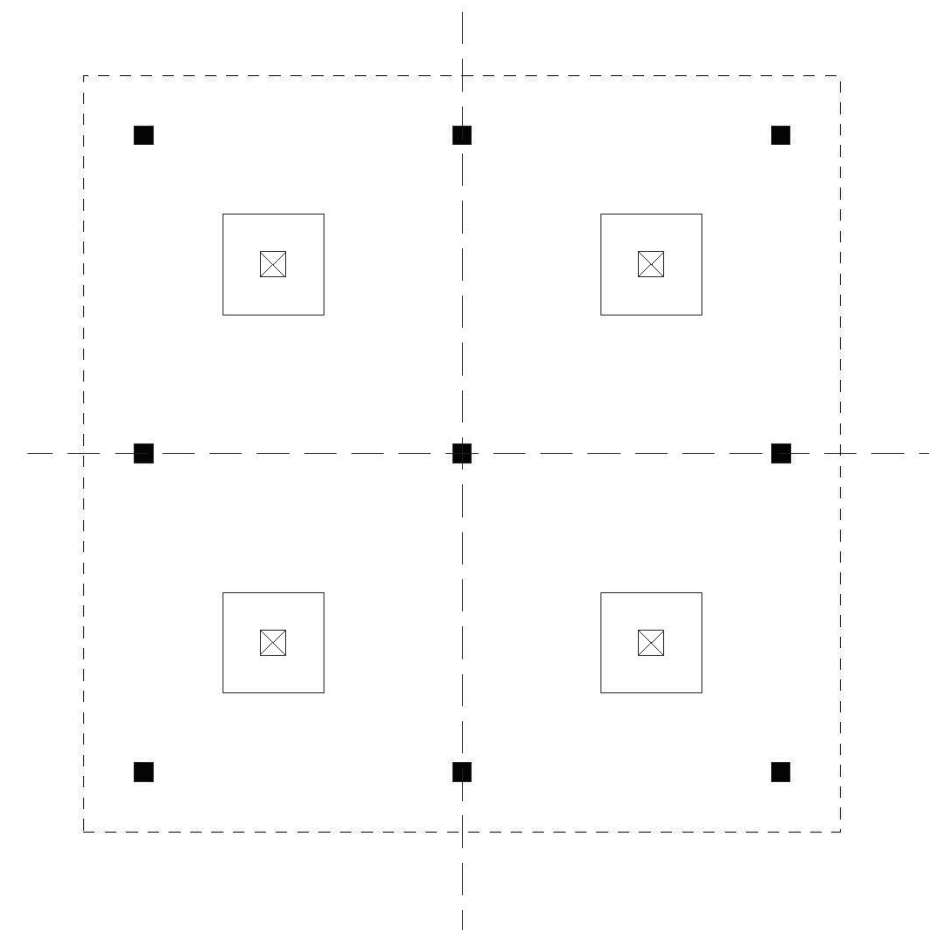
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A support structure consists of:

- Structure (columns, slabs)
- Services (piping, cabling)



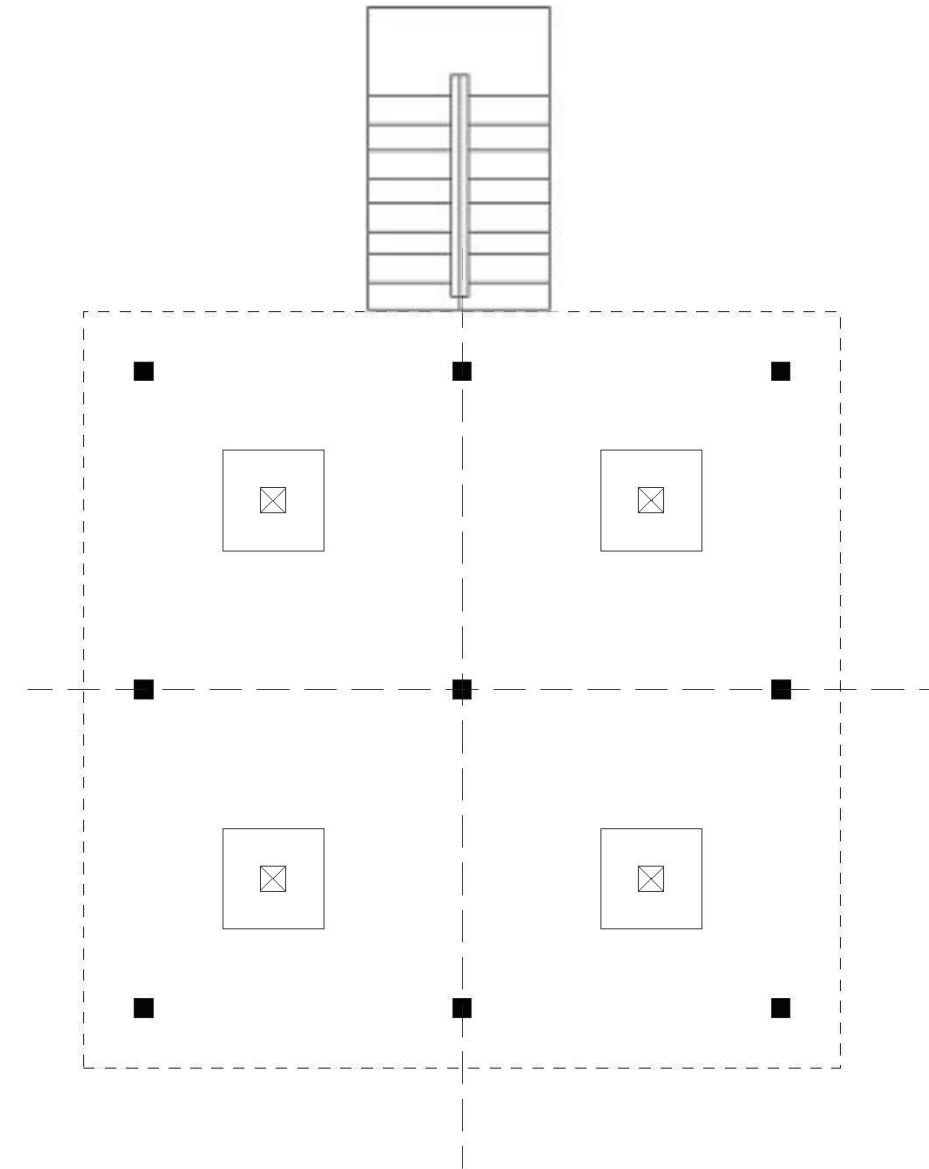
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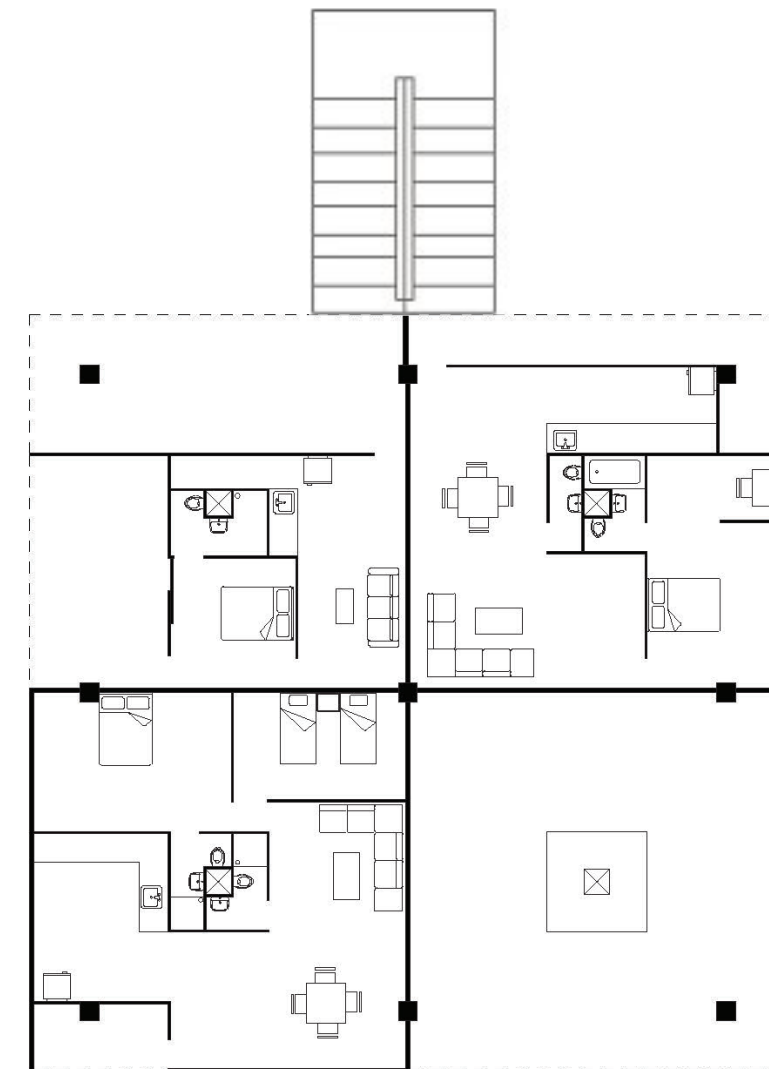
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By separating support structure from infill construction and by seeing housing as a system rather than a product, Habraken is able to use industrialization to formulate a kit of standard parts to achieve **variations** in housing units. The end products in themselves are not crucial to the design process.



Possibility of Variations

According to Habraken

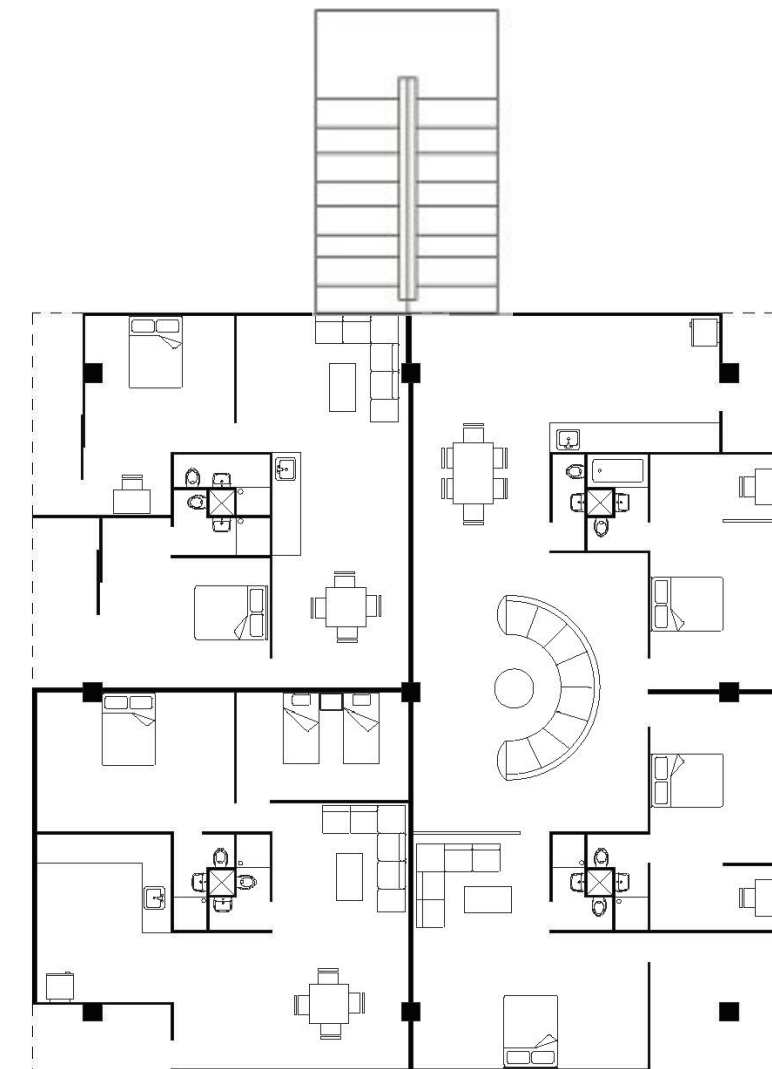
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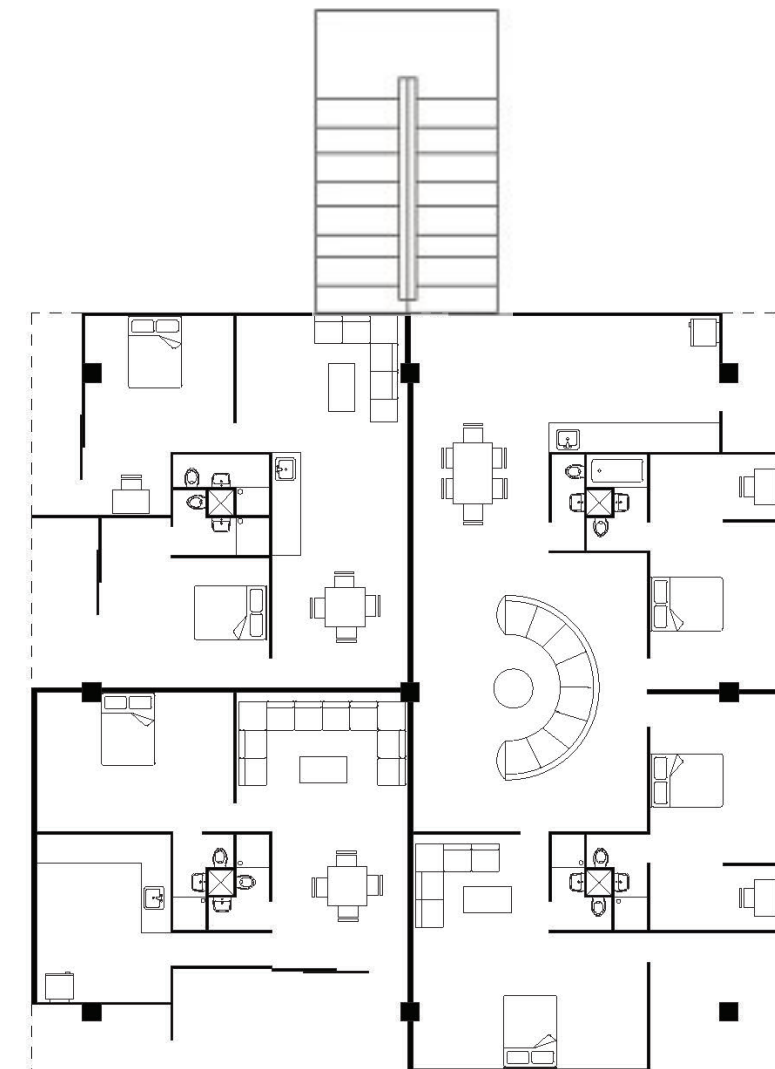
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Possibility of Variations

home, always a work in progress

home, always a work in progress



but

what happens outside the house?



**how does Habraken's theory work
in Indian context?**





Cultural Acceptance



Cultural
Acceptance

Urban Scale
Coherence



**Cultural
Acceptance**

**Technological
Feasibility**

**Urban Scale
Coherence**



**Cultural
Acceptance**

**Technological
Feasibility**

**Regulatory
Challenges**

**Urban Scale
Coherence**



Bibliography

- Aggarwal, Kriti. (2017). Flexibility in Multi-storey Apartments Determining Feasibility of “Support and Infill” in Indian urban context. (*Master’s thesis, CEPT University*).
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- Patel, Dhvani. (2017). Flexibility in Housing : Impact of Architectural Design Decisions on the Ease of Making Modifications to Dwellings in Mass Housing (*Undergraduate thesis, CEPT University*).