

## Urban-Environmental Designing of the Entrances to the River Valleys (Case Study: Darabad River Valley)

### Abstract

Tehran has the largest number of river valleys in Iran. These seven river valleys are being everyday destroyed and replaced by new and artificial buildings. Stepping into this river valley makes it clear that the artificial visage preempts the natural visage in this region. Darabad river valley, as well, is no exception to this rule, and mankind's life footprints are increasing in this river valley day in and day out. The present study is an applied research of the qualitative, descriptive-analytical, and field types. The study data have been collected through library research, field observations, and questionnaire. At first, the whole region, the level-two strategic area, and finally, the local (intervention) field have been subjected to identification studies. The analyses are carried out via offering SWOT tables for each indicator by extracting information from the completed questionnaires. In the end, the tables are presented regarding objectives, strategies, and policies for reaching solutions. Next, suggestions will be made about the plan, façade, exterior view, and the 3D designs. In the end, the quality of the immethodical changes and occupations has been evaluated in the entrance to Darabad river valley so that proper designing methods could be applied for the entrance to the river valley, pause-and-move spaces, tourists' attraction uses, and so forth. Finally, the sample of interventions that can create a dynamic and lively environment and prevent immethodical changes and occupations in the river valley have been posited.

**Keywords:** *river valley's entrance, Darabad, tourism, changes, and occupation*

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### Introduction

Population growth in the cities has led to the immethodical development of the cities both from inside and outside. The regions with high values in the urban environment have consequently undergone destruction and changes. Many adverse bioenvironmental effects have subsequently emerged. The rivers and river valleys are among the most important natural spaces always exposed to certain risks. The urban rivers are among the sustainable natural ecosystems because they are replete with rich water, soil, rocks, and vegetative cover. The negligence and carelessness in their proper protection can be accompanied by irreparable damages.

River valleys possess dual potentials; on the one hand, they can cause success in the development of a city, and, on the other hand, in case of improper use, they can become irremediable environmental catastrophes. Considering this perspective, the revitalization of this river valley entails solutions within the framework of this river valley's conservation and aesthetics. River valleys are one of the main veins of the environment's biological survival for many faunal and floral species living in these regions. The increase in the population and decrease in the suitable living environment for mankind has caused the river valleys to become human beings' living places due to their possession of many potentials. These places were cheerful and lively in the past, but they have become waste and garbage dumping sites. A majority of the cities in Iran, as well, cannot be excluded from this rule, and the increase in the population of the cosmopolitans and the absence of proper living places in the cities have made river valleys prone to abuses and

destruction. One of these river valleys is Tehran's Darabad River Valley. This foothill Darabad region features a very auspicious climate which has per se paved the way for extreme abuses in the other river valleys in Tehran (research vice chancellorship, 2016).

The existence of the Darabad River and Alborz Mountain Range has helped this place become one of Tehran's tourism attractions and recreational resorts; however, the absence of a proper entrance in this system eases the visitors' uninformed entry into the natural area of the region and leave a lot of bad effects on this system with it imposing a lot of dangers to the environment. The present study tries to design a proper entrance to Darabad River Valley to maximally prevent the problems that may otherwise emerge in the natural area of this region.

The protection and conservation of river valleys is an important and controversial subject. In all of the urban-building and urban designing conferences and journals, such a subject as ecological urban designing has been one of the primary pivots of lecturing and articles. Many professors have proposed theories in this regard, including Paseban (2009), who realizes the urban river valleys as being higher and more distinct than all the other natural resources by stating that "urban river valleys have a property completely distinguishing them from the other natural resources of the cities and that is their expansion and infiltration into the urban texture hence their high rate of accessibility. Their situation is quite the opposite of the elements like mountains, gardens, and farms which are not readily accessible for clear reasons" (cited in Kashanijoo,

2010). Considering the abovementioned materials, the present study aims at designing an urban environmental designing entrance for Darabad River Valley.

**Study's Theoretical Foundation:**

**River Valley:**

Mountains' valleys, foothills, and the regions on the slopes are vital to water corridors. Due to their secondary climates, the valleys have been from long ago a lot more auspicious than their peripheries for dwelling and exploitation. Their specific vegetative cover has made their proper places for forming life centers and developing communities in the mountains, saying Iran's plateau. Besides being the routes through which water passes towards downstream sides, the valleys are also air circulation corridors. These corridors are the vital veins for the supply of resources and corridors connecting and carrying energy and capital and allowing access and use from the upstream to the downstream and vice versa. Natural factors like elevation, slope, and population cause the creation of humidity, wind, and rain that differ depending on the mountains' unique shape and morphology. This same issue per se ends in the formation of the exclusive vegetative cover and ecological attributes and creates secondary climates (Aalinasab and Suzanchi, 2013).

Urban river valleys are among the significant factors contributing to the formation of the cities' structural and functional evolutions and changes. In these natural corridors, besides the permanent or seasonal flow of water, there are additional visual and natural values along with activity/performance patterns of different types (within the format of the recreational-touristic and economic and even, in some cases, human life performances). In the theories directed at sustainable urban development, the proper use of these regions within the framework of codifying sensitive and vital

Table 1: samples of the urban river valleys' revival programs in Europe (cited in Bemanian, 2008)

Project	Explanations
<b>The banks of Rhone River, 2006 (Les Berges Du Rone, 2006)</b>	A large section of the Rhone riverbank has been planned for revitalization by the officials, encompassing a total area of 60000 square meters in the city of Lyon. Plans for these spaces include new land uses.
<b>Nature Val De Municipalities along the saone river, including Lyon</b>	This program's goal is to revitalize the green spaces and vegetative cover established at the side of the urban river of Saone, with its objective being heightening the quality of riparian vegetative cover. The plan commenced in 1999 and took several years to complete.
<b>The Blue Network (Het Blauw Network), Brussels</b>	This plan serves the revitalization and revival of several waterways in central Brussels region, including Neerpedebeek, Molenbeek, Molenbeek Sud (Geeytsbeek), La Woluwe, Vogelzangbeek and the Broekbeek. The project has been organized in line with the hydraulic and ecological revival and visual performance enhancement and recreation of the river corridors (Het Blaw Network, 1998).
<b>Trout, 2010, Hamburg</b>	Trout, 2010, is a plan for returning the residents of a region wherein trout fish was previously raised in the selected water canals in Hamburg. The required progress in the water canals section would be made by nongovernmental

urban regions' designs has been placed on the agenda of the responsible urban institutes.

**Water Edge (Water-Land Border):**

Water edges are valuable places defining the border between the water and the land. When the land uses be temperate and balanced, and margins and riverbanks possess inherent and natural attractions, the best option would be their preservation in an intact form. When the land uses in the adjacency of water bodies impose more pressure on the environment and the need for space is increased, the risk of the border's threatening as well would also be increased to the same extent of the issue becoming a completely architectural matter (Hasani et al., 2013).

**Water Edge Revitalization:**

The term "water edge" or "riverbank" refers to the urban areas directly in contact with water. These limits usually have connections with the sections occupied by harbors and their infrastructures hence the activities performed therein. The revitalization of the water edge limits has been among the fascinating phenomena in the process of urban life revival since 1980. From the perspective of a large number of cases and different qualities of the results, such cities have become laboratories for various experiments. Although each of these cases has its own specific and different geographical properties, dimensions, cultures, and biological contaminations, they are recounted as valuable ideation sources for the future. After about 30 years of efforts in line with the revitalization of the urban water edges, comparing various cases can illuminate the key success factors (Purja'afar, 2013).

Table 1 shows examples of urban river valley revitalization programs in Europe

	organizations' cooperation. The program contains instructions and goals for 21 urban planning projects.
<b>Emscherumbau</b>	The long history of using mineral pesticides in this region reflects the identity of the basins in the city's river of Emsher along the RuHR river valley. The plan was started in 1990 and aimed to revive the region's urban basins, eventually leading to sustainable water exploitation and supplying the region's future needs.
<b>Isar Plan, Munich</b>	ISar Project was commenced in 1995. The plan is a combined program for Bavaria State and Munich aiming to improve the fortifications against flood, enhance the ecological status, and recreation of values in Isar River in Munich until 2006.
<b>Stream Concept of the City of Zurich</b>	The concept of clean water was expanded for separating the non-contaminated water canals from wastewater canals with such an idea as waterway and water canal recreation. The objective of such separation is maximal cleansing of the water canals, organizing their surfaces to enhance the ecological values and recreation in the urban regions of Zurich.

Table 2: designing scales

<b>Project's name</b>	<b>Designing scales</b>
<b>Hudson River Park</b>	Creation of green-health route
<b>Meekins Mill River Park</b>	Biological liveliness, healthcare enhancement, green route creation
<b>Rocky River Park</b>	Support of nature, creation of green routes, preservation, and reclamation of natural systems
<b>Bratislava River Park</b>	Creation and conservation of green routes and health enhancement
<b>Harlem River Park</b>	Creation and conservation of green routes, emphasizing the green spaces and health enhancement
<b>Colorado Riverbank Park</b>	Enhancement of education level, support of the nature, conservation of green spaces, and enhancement of health
<b>Comprehensive plan for conservation and development of a sample touristic region in the periphery of Zayandeh Rûd</b>	Climatic comfort and conservation of the old texture

Based on table 2 In the foreign samples, all of the projects have been accomplished through prior planning in the long run. These projects have been able to accomplish their objectives within several years through planning. Considering the presented domestic and foreign samples, the followings are the generally adjusted designing principles:

Land use establishment should be based on bioenvironmental analyses considering the soil erosion process, the existing topography of the area, vegetative cover, and water streams as the most substantial and most important determinants (Dashanpur and Parivar, 2013). The conservation of the riparian vegetative cover and not abusing the privacies in line with the heightening of security and the enabling of proper view should be taken into account when designing the elements. The determination of the land uses, and their siting should be coordinated with what is required to eventually lead to the elevation of stability and sustainability and end in

offering novel patterns. In offering the plans, the maximal supply of view over the site's landscape from the lateral lands and vice versa should be considered. The land sitting should be carried out so that the existing spaces and facilities can be maximally exploited. The method of site access should be balanced concerning the requirements.

#### **materials and methods:**

The present study is an applied research of the qualitative, descriptive-analytical, and field types. The information has been gathered via library research, field observations, and questionnaire. All entrances to Darabad River Valley have been studied, and, after generally introducing the city of Tehran, the study's pervasive and overall area will be evaluated. Considering the project site's being situated in Tehran, this region will be analyzed, and references will be generally made to the region. In the study's case, Darabad River Valley's

historical trends are of great importance and can be expressive of this region's formation style; they can also be used for explaining the region's high-level upstream projects that have been designed and implemented during the recent years. The maps of the Darabad area's current statuses will be investigated separately. One of the most important streets of this neighborhood is Purebtehaj Street, which, considering its Table 3: project's goal, policy, and strategies

effect on the intervention domain of the project, has to be completely recognized and analyzed. After recognizing the immediate domain, the intervention area will be investigated. The entrances of the area and the entire region have been divided into sequences and subjected to analyses.(table3) The modeling of the intervention domain's status quo will be presented in the upcoming sections.

Goal	Policy	Strategies
<b>Prevention of changes and occupations in the natural area</b>	Prevention of the new constructions	Designing an entrance for the river valley Providing information and control on the entrance section
	Creation of filters in the entrance to the river valley	Rendering the entrance more pedestrian-oriented Designing of proper places with parking lots
<b>Increase in the number of the visitors and tourists</b>	Creation of land uses with tourist attraction potential	Designing coffee shops, restaurants, and so forth Designing domiciles and suits
	Creation of welfare service spaces and land uses	Designing playgrounds for children Designing traditional food houses
<b>Enhancement of liveliness and dynamicity</b>	Creation of proper land uses in proportion to the region's natural countenance	Designing mountainous bicycling routes Designing forest parks Designing proper furniture in proportion to the spaces Designing green walls on the riverbanks
	Creation of land usages with service-providing capabilities	Designing outdoor amphitheaters Designing outdoor restaurants and coffee shops Designing small malls and stores Designing a place for the hucksters' gathering

### The Status Quo of Darabad Neighborhood:

It is read in the book "historical geography of Shemiran" by Manuchehr Sotudeh that "Shemiran is located in the village of Darabad in the northern section of Aqdasiyeh (Hesar Molla). Darabad is situated within a four-kilometer distance from the eastern side of the Holy Shrine of Saleh on the slopes of mountains. Its water is sourced from mountains and moved through aqueducts to the village; there are several orchards, and 367 individuals live in the houses therein. Shah Abad, where patients with tuberculosis are held in a hospital, is the very land of Darabad; the hospital has beds for eight hundred to a thousand persons. The hospital's construction was finished on the 15<sup>th</sup> of August, 1942, and, since then, Darabad's name has been forgotten and replaced by Shah Abad. Ghuchak Road

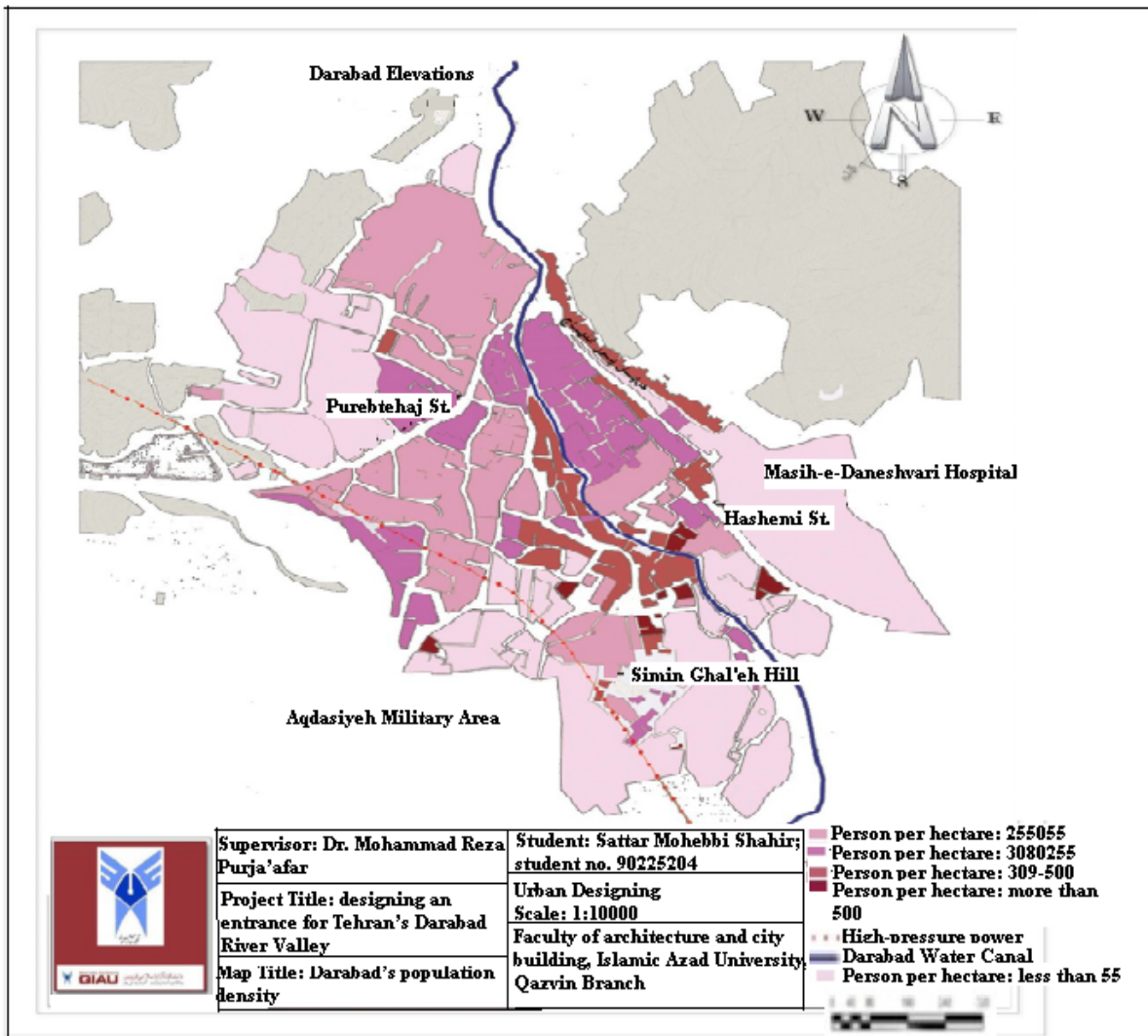
passes from the south of Darabad and north of Araj in the close vicinity of a recently built bridge on Darabad River". Considering the above-presented materials, the seminal core of Darabad, wherein Mozaffar Al-Din Shah had a castle, was formed in 1900 and, later on, and with the establishment of a hospital for patients with tuberculosis, the place started booming in 1942 with Darabad Village being formed in the periphery of this main core in the margins of Darabad River. There have been and are farmlands in the margins of the village, as also seen in the aerial photos taken in 1956, but the village has fewer orchards and gardens in contrast to the other spots of the region. Gradually and with the expansion of Tehran and its district hence Darabad, the farmlands have become loci of

construction, and the residential houses have taken the place of the farmlands. The aerial photos taken during 1979 are well indicative of the substitutions. As seen in a photo taken in 2002, all of the green lands, farmlands, and orchards were destroyed in this area, and changed in their land usage to buildings and apartments. Besides the destruction of farmlands and the orchards and gardens, this evolution trend and the rapid and unplanned expansion have been followed by raids towards the rivers and the northern elevations of Darabad and the destruction of the lands therein.

The maps of the current status were prepared for the Darabad area in 2006, and they are currently being kept in the housing

and city-building organization. In recent years, the maps have also been subjected to transformations, with the largest frequency of changes being found for the land uses from farming to apartment and residential places in a process called commercialization of lands. The land uses have been mostly changed based on meter integration and old neighborhoods' renovation plans in which new land uses and construction materials have been recommended. The maps of the Darabad Neighborhood's current status have been precisely investigated, as explicated below.

(figure 1)



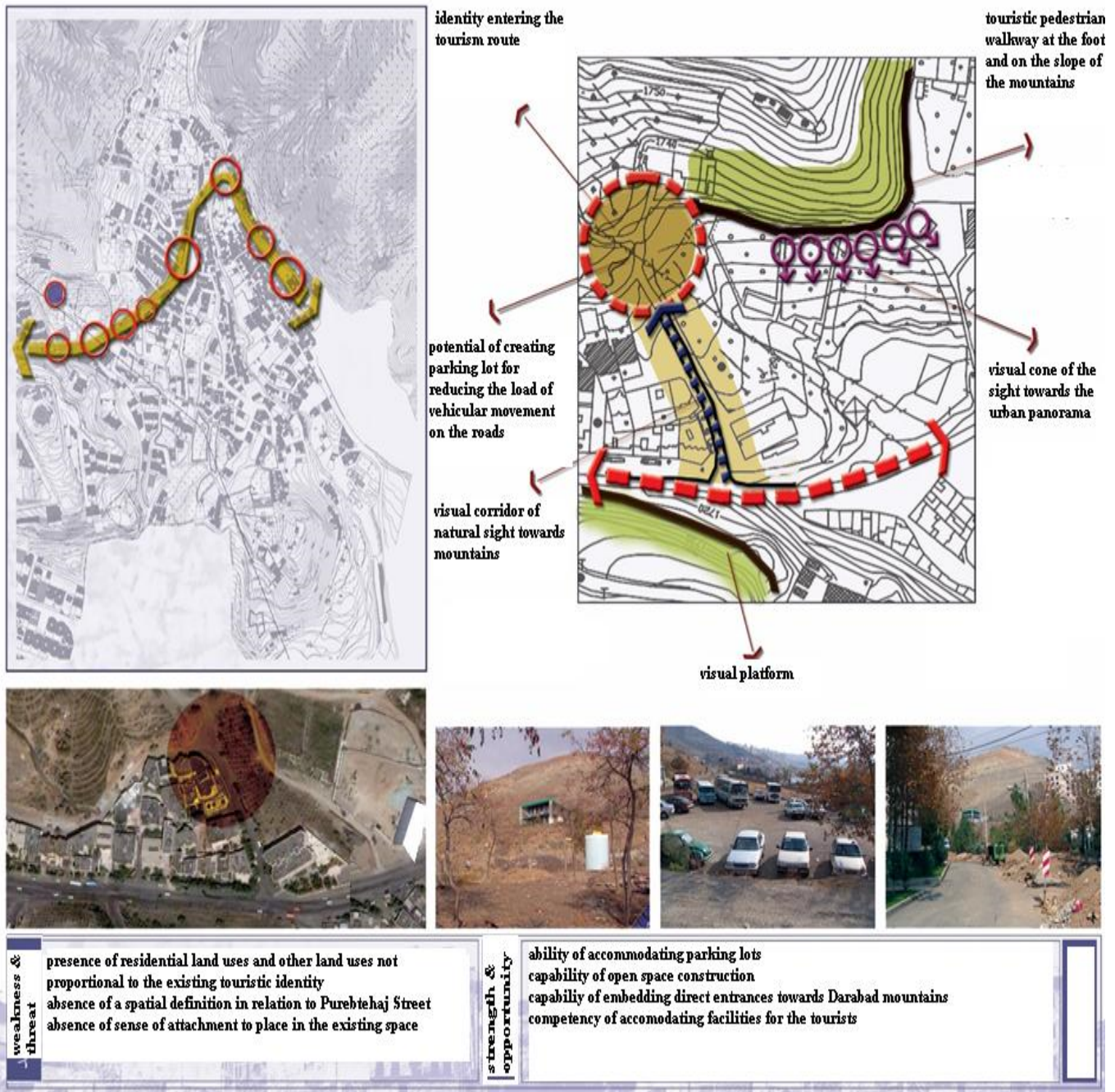


Figure (1): maps and photos of Darabad Neighborhood's current status

**The Recognition and Analysis of the Intervention Domain:**

The intervention domain is stretched from the beginning of Shahid Mohebbi Street to the beginning of the natural area. The site's overall area is 82500 square meters. In recent years, the

domain has undergone many constructions by the municipality, but they have not been able to overcome the problems.

(figure2)

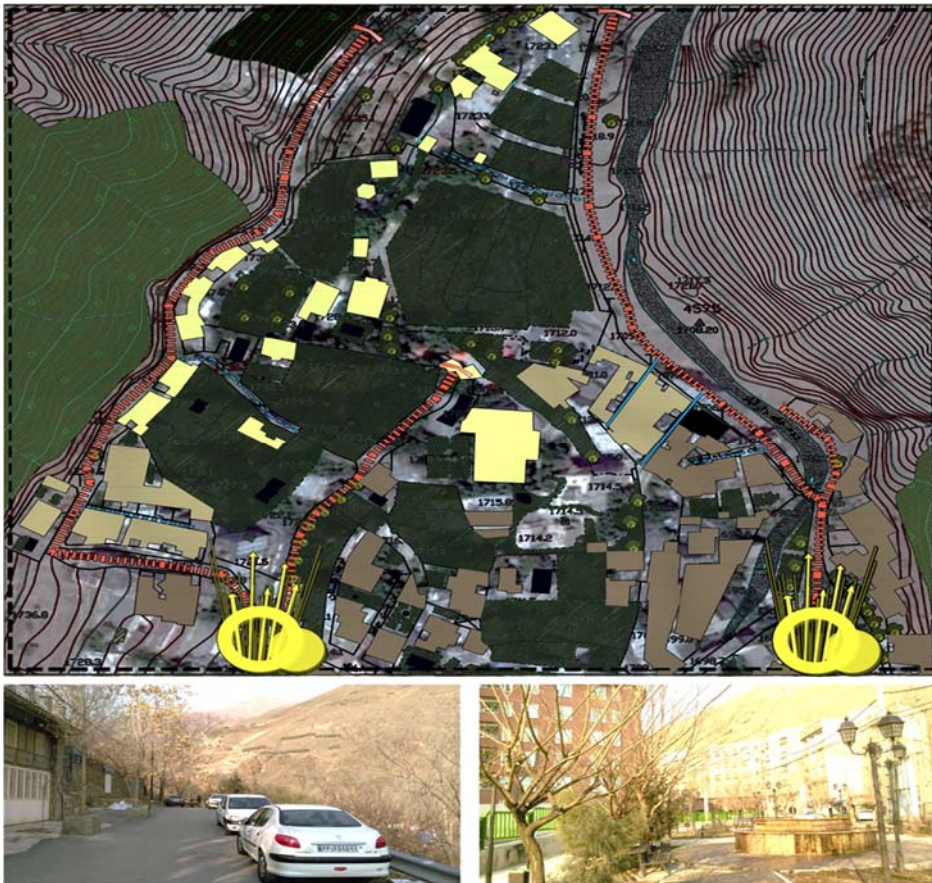


Figure (2): plan and an image of the intervention domain's entrances

The intervention domain has two primary entrances, the most common entry being through Purebtehaj Street. The secondary entry happens through Shahid Eghbali Street. The entrance part of the river valley does not have any element or tableau for the travelers to be guided. The primary entrance features a wider space and a higher sense of invitation than the secondary entrance. In classifying the entrances, the primary entrance is more publicly utilized by visitors to enter Darabad River Valley. The secondary entrance, characterized by older

textures, is most frequently applied by the locals for accessing the river valley. In the primary entrance, most of the constructions are new, and the texture has also been renovated. Based on the information extracted from the domain, there are mostly five-story buildings made of brick and stone, and wood has also been used in some of the buildings. Still, the texture is older in the secondary entrance, and there are usually one-story buildings made of cement.



Figure (3): a plan of the sequences in the intervention domain

**Base on figure 3:**

Region A: the primary entrance to Darabad River Valley can be seen located in this region. The entrance is made through Purebtehaj Street, the primary street in Darabad Region. There is also a bus stop seen located near the entrance. The buses start from a station on Artesh Autobahn and stop at a station around Tajrish station. There are also seven five-story buildings with brick and stone construction materials in the entrance section; presently, we are bearing witness to an increase in these buildings.

Region B: in this part, the overall visage of the city is semi-urban and semi-natural. The separation of the pedestrian walkways and vehicular roads has been perfectly observed in this section. The floor of the roads is made of asphalt, and the pedestrian walkways are made of stratified stones. Unfortunately, some sports instruments placed on the walkways expose the pedestrians' security to certain risks.

Region C: in this section, the urban visage has been reduced, and the natural countenance of the region is more discernable. Parking lots have been beforehand designed and constructed in an inclined manner in this section, but they cannot meet the needs of the drivers in the region on many days. The urban furniture in this section is mostly concrete-made benches, which is in proportion to the peripheral environment.

Region D: in this section, the domain is fully natural. Most of the parking areas can be seen in this part. The vegetative cover of this section has caused the space to look lively and happy. The parking lots of this section are inclined, but cars are seen in the middle section of the street, considering the parking spaces shortage. Nighttime lighting is more suitable in this section compared to the other parts, and many more visitors are seen in this section at night.

Region E: this section is the pedestrian walkway connecting the entrance of the river valley to the completely natural parts wherein the vegetative cover is intact, and the Darabad River is especially showing off in such a way that it is rather hard to imagine such a space's existence in Tehran.

Region F: the secondary entrance of Darabad River Valley features a completely urban visage in this section that is also envisioned as the old texture of Darabad, but it has undergone renovations. One of the section's problems is the steep walkways if any. The recent constructions in this region have made it lose its natural visage and take an urban countenance.

Region G: like the previous region, this part also features an urban visage. It is deemed the older texture of the Darabad Neighborhood but has recently undergone a lot of construction. The older texture of this section contained one-story buildings that have now become four-story buildings. The newly implemented urban shells do not conform to the region's vernacular architecture and are mostly made of brick and travertine. One of the section's problems is the steep walkways if any.

Region H: in this section, the city features a semi-urban semi-natural visage. It is considered the older texture of the Darabad Neighborhood, but no construction has been recently performed. One of the section's problems is the steep walkways if any.

Region I: the last residential buildings of Darabad are in this section, but they do not have parking lots. The oldest natives live in this section. Amongst the properties of this region, the favorable vegetative cover and preservation of residential units can be pointed out. The old shelves of this region have been made of the stone materials found nearby, and they perfectly match the region's architecture.

Region J: this part includes a pedestrian-oriented movement path connecting the river valley's entrance to the completely natural section. The high density of the vegetative cover and Darabad River in this region have granted a special manifestation thereto. The nighttime lighting is completely inadequate, and no fences or guardrails are seen to showcase the roadside limits.

The peripheral regions of the Darabad Region are covered with mountains, and this has caused Darabad to be sloped towards the mountains. The river passes through a valley, and there is a trail walkway stretched alongside the river to Darabad's elevations.

**Findings:**

**SWOT Analysis:**

Considering the thorough recognition of the area, efforts have been made to identify the factors and features influencing the phenomena so that the district and system can be studied. The following **table4** is the product of the studies and, as seen, it contains the weak and strong points and the threats and opportunities. (table5)

Table 4: strong and weak points and threats and opportunities of the area

Strong points	Weak points	Opportunities	Threats
<b>Auspicious weather</b>	Absence of a good place for car parking	Increase in the number of tourists	Congestion of the vehicles at the entrance of the river valley
<b>Region's coziness</b>	The absence of recreation land uses in the region	Creation of land uses conforming with the nature	Prediction of no preventive measures for the natural disasters

<b>View and natural landscapes</b>	Absence of proper furniture in the region	Creation of land uses for attracting tourists	Burning of the trees in the natural domain
<b>Climbers' constant use of this river valley</b>	Absence of proper lighting at night	Creation of pause-and-movement pathways	High congestion of vehicles on the weekends at the entrance
<b>Easy access to the river valley from the whole city</b>	Absence of service and welfare land uses	Transformation of Tehran's touristic river spaces	Absence of guardrails at the entrance to the river valley, and the rock falls on the paths
<b>Existence of medicinal plants in the river valley</b>	Absence of enough spaces for the individuals from all age groups	Creation of small traditional bazaars and exhibitions	Dumping and throwing of garbage in the semi-natural and natural-domains
<b>Existence of green routes</b>	Absence of proper information-providing the tourists	Creation of routes with green edges in the river valley	Individuals missing during winter
<b>Cleanliness of the living environment in the semi-natural areas</b>	Excessive construction during the recent years	Creation of entrance to the river valley with an ecological approach	Destruction of the entrance to the river valley
<b>Presence of a good deal of vegetative cover in the region</b>	The new environment's illegibility concerning the natural environment	Creation of ecological parks	Suspicious deaths as a result of the animals' attacks
<b>River valley's recognition as an intact space</b>	Absence of life security in parts of the river valley	Transformation of Darabad river valley into one of Iran's tourist resorts	Life and financial loss risks in the uncontrolled parts

Table 5: calculation of the final coefficients

Question number	1	2	3	4	5	6	7	8	9	10	Sum
strong points											
Initial coefficient	96	90	88	81	72	65	75	71	60	89	787
Secondary coefficient	0.12	0.11	0.11	0.10	0.091	0.08	0.095	0.0902	0.076	0.113	1
Rank	4	4	4	3	3	3	2	2	1	1	27
Final coefficient	0.48	0.44	0.44	0.30	0.27	0.24	0.18	0.18	0.07	0.11	2.71
weak points	1	2	3	4	5	6	7	8	9	10	Sum

Initial coefficient	44	56	58	55	53	65	58	74	57	67	587
Secondary coefficient	0.0704	0.095	0.098	0.093	0.0902	0.11	0.098	0.126	0.097	0.114	1
Rank	4	4	3	3	3	3	2	2	1	1	26
Final coefficient	0.28	0.36	0.29	0.27	0.27	0.33	0.18	0.24	0.09	0.11	2.42

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opportunities	1	2	3	4	5	6	7	8	9	10	Sum
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Initial coefficient	70	75	79	82	70	60	75	79	68	81	739
Secondary coefficient	0.09	0.11	0.10	0.11	0.09	0.08	0.1	0.1	0.09	0.1	1
Rank	4	4	3	3	3	2	2	2	2	1	26
Final coefficient	0.36	0.40	0.30	0.33	0.27	0.16	0.20	0.20	0.18	0.10	2.5

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threats	1	2	3	4	5	6	7	8	9	10	Sum
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Initial coefficient	58	45	34	79	41	50	44	55	76	42	524
Secondary coefficient	0.11	0.08	0.06	0.15	0.07	0.09	0.08	0.1	0.14	0.08	1
Rank	4	4	4	4	1	1	2	3	3	1	27
Final coefficient	0.44	0.32	0.24	0.60	0.07	0.09	0.16	0.30	0.42	0.08	2.7

In the questions that were prepared and put forth to the addresses, all of the individuals stated that they did not have

any information about the natural area of the river valley, and they were all found intrinsically entered the area and caused

that much disorder. An absence of proper parking lots and land uses was also observed capable of meeting the visitors' needs. Most of the individuals confirmed the existence of intact spaces in this river valley compared to the other river valleys in Tehran. The absence of nighttime lighting and, also, furniture and designed natural parks in this river valley were among the cases pointed out by most of the addresses. Creation of land uses like restaurants, fast food shops, and coffee shops were among the most frequent wants. The absence of spaces for all the age groups in the river valley's entrance is one of the essential problems as also stated by the visitors among the weak points. The insufficient providing of information through signs in the entire river valley's route has caused the individuals to unintentionally enter the natural areas and cause problems from burning the trees to the dumping and throwing of trash. Most individuals have emphasized the lack of conformation between the recent constructions and the region's visage; they all realize the use of no vernacular masonry as the cause of this distress in the region's countenance. The visitors have underlined the absence of service-providing land uses like small bazaars for the hucksters as well as flower malls and permanent stores.

**Discussion:**

One of the most frequent problems in this area is the inadequate number of parking lots and inappropriate car parking. The

current parking lots in this region are in the worst situation for the fact that there are cars seen usually parked on the pedestrians' walkways, and they both occupy a large part of the area and blur the border between the walkway and vehicular roads, and this has caused special disorders in the entrance to Darabad river valley.

Two plans have been investigated in the section on the siting of Darabad River Valley's parking lots, and the best choice has been eventually made in this regard. In the first option, the edges near the entry to the river valley have been proposed for use as the parking lot in the current situation. The plan displayed in the figure below includes using the edges under their current circumstances as the parking lots; this prevents new constructions, and a small deal of road paving can provide a huge amount of space for car parking. This way, the primary natural countenance of the river valley can be preserved, but it is prone to certain problems. The creation of parking lots on the mountains' edges are dangerous due to the steepness, and the construction of parking lots at the side of the rivers is accompanied by problems like falling rocks, the formation of slippery floors during winter, and so on. The construction of parking lots at the side of the river does not resolve any of the current problems. It ends in a vaster area for parking and the constructional changes that should not be brought about towards the river valley cannot be barred.

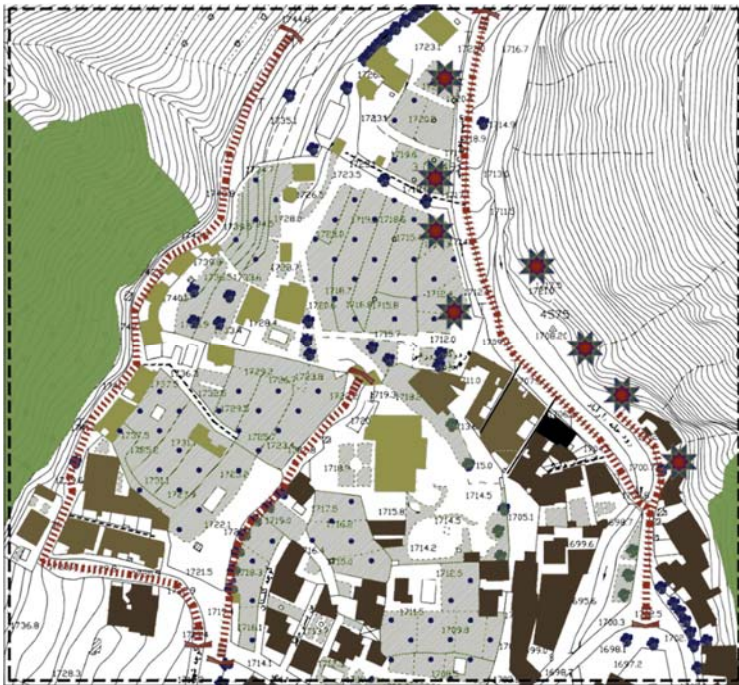


Figure (4): proposing the first alternative for parking lot construction

The best siting operation for the parking lots includes excluding the vehicular roads from the primary route ending in the river valley entrance and separating the walkways from the roads. Due to the same reason, considering a large number of

vehicles on the weekends and the absence of enough space for car parking, it is suggested that parking spaces should be made available outside the movement paths. The selected space shown in the figure4 is empty of any land usage and vegetative

cover, and it is not positioned in the primary corridor to the entrance of the river valley. No problem would arise in terms of legibility. This space can respond to all the cars' parking needs during peak traffic hours in the region. Such a measure can widen the existing spaces. It is worth mentioning that the parking area is uniquely specific to the entrance of the river valley. The selected land is 5000 square meters in area. This space also features good accessibility for visitors and tourists. It is also highly legible from Purebtehaj Street to the main entrance of the river valley and is also situated near the entrance of the river valley. One of the other attributes that contribute to the selection of this space as the parking lot is that

it is near the walkways but does not intermix with them. When a route is chosen as the pedestrians' walkway, no construction is made on it. In other words, a red line is drawn at the entrance to the river valley by selecting this space as the parking lot, and the vehicles cannot cross this red line from which the visitors should walk the entrance to the river valley. It must be noted that the region's architectural pattern is of a high priority for this public parking lot and the vernacular masonry will be used for its construction; additionally, the created land use is in matches the natural visage of the river valley.

.(Figure 5)



Figure (5): proposing the second alternative for parking lot construction

Two designs can be taken into account to offer the primary plan for the entrance to Darabad River Valley. In this section, both design types will be accurately investigated, and the best one will be chosen for the siting. In both alternatives, all the physical program's needs have been satisfied. In the first proposed plan that has been exhibited on the map in Figure 6, all of the land use and required spaces have been designed to be situated in an expanded manner at the entrance of the river valley. The land uses needed for this plan have been situated at large distances from one another, so the system cannot be so controlled.

On the other hand, since these land uses have been placed in an expanded manner in the entire area of the entrance to the river valley, the creation of vegetative cover can help protection of the region's natural visage in such a way that it

would seem that no artificial landscape has been added to the natural landscape. All the spaces match the region's topography, and all of the land use conforms to the river valley's natural visage. The main accesses have been drawn on the natural access routes, and all of the lines are in accordance with the region's natural lines. In the entire site, the vegetative cover causes the covering of the land uses, and the natural landscape of the region would be perfectly conserved. The land uses have been spread over a large area along with the site, and the paths eventually end in a plaza. In each of the squares, an element of nature has been designed as a sign, with the lines stretched as continuations of the natural lines. The site's main square has been considered a more prominent land use and marks the main entrance to Darabad.



site is the proper land for designing the service and welfare land for visitors.

The site is completely open, and the land uses in this river valley can be blended to change it into one of the most attractive touristic resorts in Tehran's river valleys. The selected site is completely connected, from one side to the urban area and from another side to the natural area of the river valley, and this causes the attraction of a larger number of individuals to visit the area to spend their leisure time. Easy access, proper parking lots, proper view of the landscape, auspicious landscape, appropriate weather, and so forth are the

site's potential. There are not many spaces in Tehran featuring such capabilities. One of the other attributes of the site is its being at the side of the main route to the river valley. Considering the current status of the river valley and the placement of the main route to the river valley at the side of the river, efforts will be made to widen the route and design a proper entrance at the side. The selected size is designed to be positioned at either side of the routes from which a proper view should be provided. The second option possesses more positive points and can better accomplish the objectives of the plan

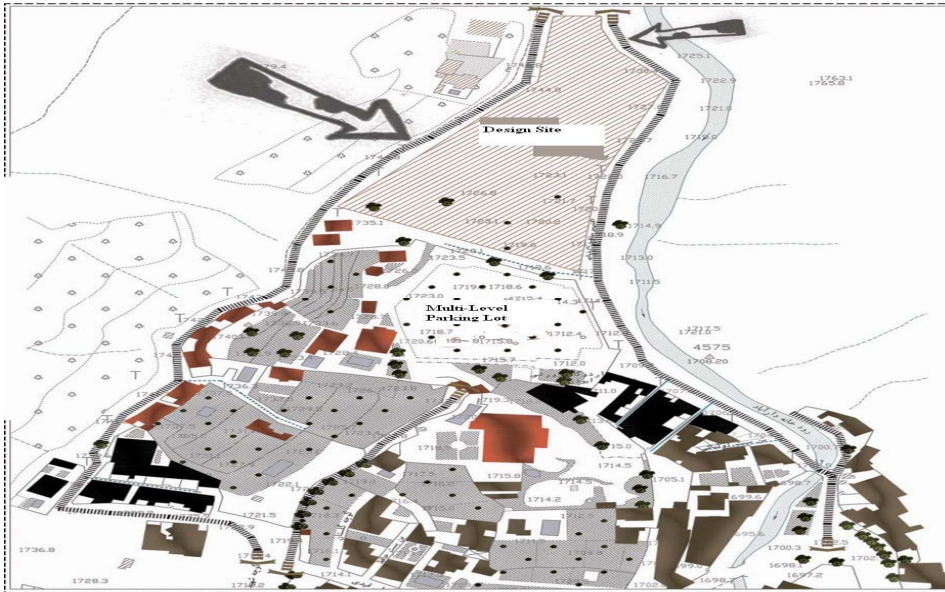


Figure (7): proposing the second designing alternative

### conclusion

In designing the entrance to Darabad River Valley, all of the needs in the natural section of the river valley have been identified, and all of the visitors' needs for parking lot and other things have been designed to be completely met in the entrance section of Darabad River Valley. By creating a proper entrance and making the entrance of the river valley more pedestrian-oriented, all of the changes have been considered to be stopped. Then, services can be provided at the entrance to the river valley so that the abnormalities can be barred from happening in the natural section. The design works are parallel to the considerations related to the natural landscape of the river valley, such as the complete conservation of the region's river valley. By offering a proper design of the entrance to the river valley, as performed herein, and enhancing the service-providing, more visitors and tourists can be attracted to the region, and this ends in the elevation of the region's liveliness and dynamicity. The land will be in such a way that all the social classes and age groups can be served, and this per se causes an increase in the liveliness of Darabad River Valley. The designing works carried out herein cause an increase in the jobs available to the locals and natives who can also carry their

local products to show and sell to the visitors. Spaces like amphitheatres can add to the population visiting the site and can also be applied for holding celebrations and religious ceremonies.

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### Conflict of interest

None.

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### Ethics statement

None

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