

Mundane Highways or Identity Rich Road Scape: An Element and Location Based Approach to Place Identity

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Abstract--*Visual perspective of people differs in perceptions and observations of drivers and travellers. The planning of pedestrian environment needs assumptions of how the pedestrians respond to features as they have their planned paths. Consequently, most research interest in public environments focuses on the behaviours of the pedestrians related to those features. There are picturesque and typological studies. Metric, geometric and topological models have established useful in identifying the density and direction of the movements. This paper addresses the social imperative to reconsider the value of features along roadside environment in direct elemental approach. The focus of the research is on thirteen shortlisted elements in a high capacity highway, in the culturally rich state of Tamilnadu, India. The elements such as signage, trees, washrooms, food joints and teashops are ranked based on a questionnaire survey (n=250). Statistical analysis helps to examine the equal probabilities of significance of elements with respect to their occurrences. The research characterizes elements based on natural, cultural, functional, and recreational characters. The functional elements are more significant to people as compared to rivers, historic structures, shrines etc. However, natural, cultural, or recreational elements are more vital for place identity. The research concludes with suggestions on possible grouping of elements essential to stimulate an enriching experience of place identity.*

Key words--*identity elements; highways; sense of place; character; travel routes, Visual perception, roadside environment*

I. INTRODUCTION

For ages, people's conceptions and value systems have evolved and been transformed, especially in the traveler's experiences along the country's highways [5]. The past three decades has been witness to uninformed and unexpected transformations in conveyance with high-speed roads allowing people to reach their destination at unprecedented speed in the comfort of their own conveyances. The construction of incipient highways as well as the widening of old roads have taken more of the roadside land and are growing at an expanding pace. Developers and entrepreneurs in developing countries visually perceive this trend as giving them scope to expand their business territories alongside the highways, with a plethora of emerging motels, hotels, resting lodges, and restaurants. Highway design is often associated with geometric design, safety, and accommodations guidelines [3]. The unseen part of it often associates with the recollection of people, memories, and events with

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the bypassing and orientation of oneself with places along travel routes. An innovative and substantial design of elements can lead to place making along highways.

Earlier, the travel corridors of culturally rich places were prominent for certain elements that stood for the place's cultural identity, but today's highways lack the visual and functional character that once delighted the natures of traveller. Every element along a highway connects to the identity of a place accessible from the travel route and contributes something paramount to the experience of place identity. Understanding the pragmatic aspects of this concept is a key to addressing the difficulties in examining the history of the roadside landscape, bygone travelers' feelings of place identity and momentary elements along the present travel routes that are eradicating the unique character of intercity areas. This study describes the disappeared elements that once allowed highway riders to experience a sense of place. The focus is on those features of interest that imbues in any traveler's observance and that they might look forward to visually perceiving on a familiar route.

II. LITERATURE REVIEW

The Mundane Roadscapes

Roadscape refers to mundane spaces, but are capable of transforming into homely familiarities and imaginative connections [7]. The roads vigorously influence the demeanor of traveller and the driver associated as they physically move the person from one scenario to the other. Satisfaction is an important antecedent responsible for behavioural intentions enabling people to revisit creative destinations [10]. There is a considerable reference to the social origins of travelling and the choices taken during travel [1]. The elements can be natural resplendencies such as flowering trees [8], [18], [27] hills and mountains, gardens and water bodies [4]; [24] or manmade structures such as shrines, temples, bridges, resting stones, etc. These elements can additionally be functional such as toilets, teashops, restaurants, lodges etc., [19] thereby varying in scale. Gypsies across the globe are the best example to people who have the sense of place through their movement [23].

Casual observer senses and connects

The passerby, who travels for hours along the mundane road environments need certain elements or spaces to connect them with the contexts crossed during the travel. Distinction, duration and expansion are discussed in relationship with passerby connects [9]. Travellers neglect cognitive distances in road trips [22]. Jensen discusses the flows of meanings with cultures of movement in urban mobility [11]. In the past few decades, research has brought forth a number of publications in the area of place identity and place attachment [15]. The purpose of trips also play major role in the travel choices [6]. Lean considers transformations through travel as a social phenomenon [14]. The ecorouting concept appreciating the natural corridors along travel gains popularity irrespective of the trip distance and extended time of travel [2].

Threat to identity loss

Many countries that inspire road-building programmes are victims to detriment their natural and cultural structures, elements and spaces alongside the incipiently constructed roads. The threat is assured as people have started depicting the lost recollections of routes, roads and geography in contemporary art [12]. Developing countries have suffered many predicaments and issues caused by loss of such elements along highways [17],[20],[22]. The Highway expansion coerces immensely colossal cities in developing countries,

which leads to cultural decline due to removal of scenic features along their routes [18], [20], [25]. The clear depiction of place identity elements influences the travellers who are not interested in mundane roads and are hooked to mobile technologies [13].

III. METHODOLOGY

The present investigation comprises a case study of a highway that passes through several small towns. The methods of observation, categorizing, and analysing the elements of a highway landscape were extracted from the literature review. The study identifies 20 elements with physical observations, face-to-face interviews and survey questionnaires, shortlisting of 13 based on the presence of elements along the study stretch. The choice of study parameters is listed based on literature reviews of prior research. Prime participants for the survey are vehicular travellers. The participants were involved in sharing their experiences of identifying themselves with the elements and places.

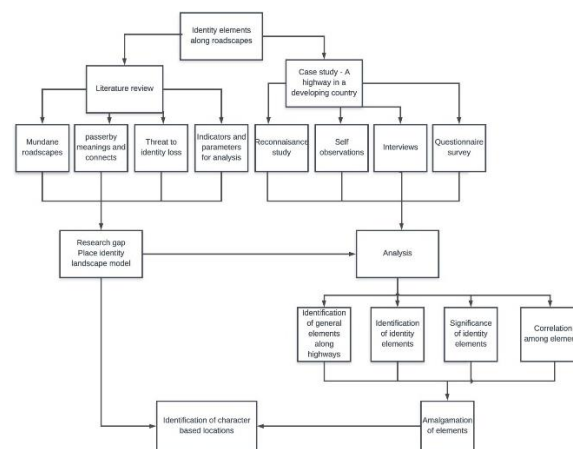


Figure 1 Framework of the research

Place identity landscape model

A hypothetical model of place identity takes into consideration the setting, environment, and physical conditions of the place based on the descriptions, photographs in the literature and physical observations along the study road. The patterns of settlements and neighborhoods as well as the traveler's perceptions of place identity are analysed. the goal was to examine the possibilities of reconstituting the place identity by improving those elements that have eminent qualities of cultural heritage. The speed limits and the time spent at pause points along the corridor change the perception of people. There is a need to understand the natural, cultural, functional, and recreational elements to define and categorize the hypothesized model. This depended on the study area, because the type of elements predominating might include scenic features such as a riverbank, coastline, or hilly areas, or manmade structures. In some places, a single element makes an inordinately immense impact, than a group of elements. The inclusion of social, economic, and political elements can influence the character of pause points.

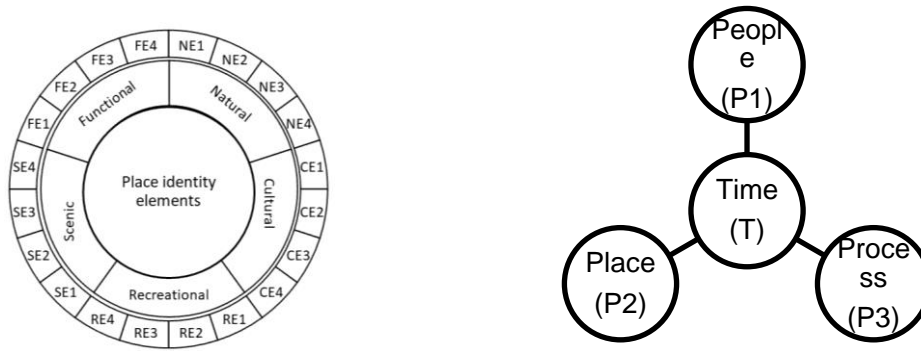


Figure 2 a) Model of place identity b) Components of Place attachment

The elements are the direct representations of place identity along travel routes, they can be classified as shown in figure 2 (a). The characters natural, cultural, functional, recreational and scenic are also placed in a circle as they can connect, overlap and dynamically influence the other. For example, a cultural element can be scenic, natural and functional at the same time. Each character contains 4 elements which are studied during the reconnaissance survey. The components of place attachment when added with the component time, enhances the place identity. The link between the components are shown in figure 2 (b). Time can be taken as the time duration for the identification and observation of elements as well as time of the day. Figure 03 represents the placement of the elements along the highway. Nine elements are shown with the character codes. It is evident that certain elements have multiple characters. Most natural elements are associated with natural and scenic characters. The scale of the elements also play a major role in the prolonged observance and lasting memory of the traveller. The cultural elements are associated with the people of the place and are the stories revealed to new travellers. They are also place markers, landmarks and distance identifiers for the frequent traveller along a roadscape.

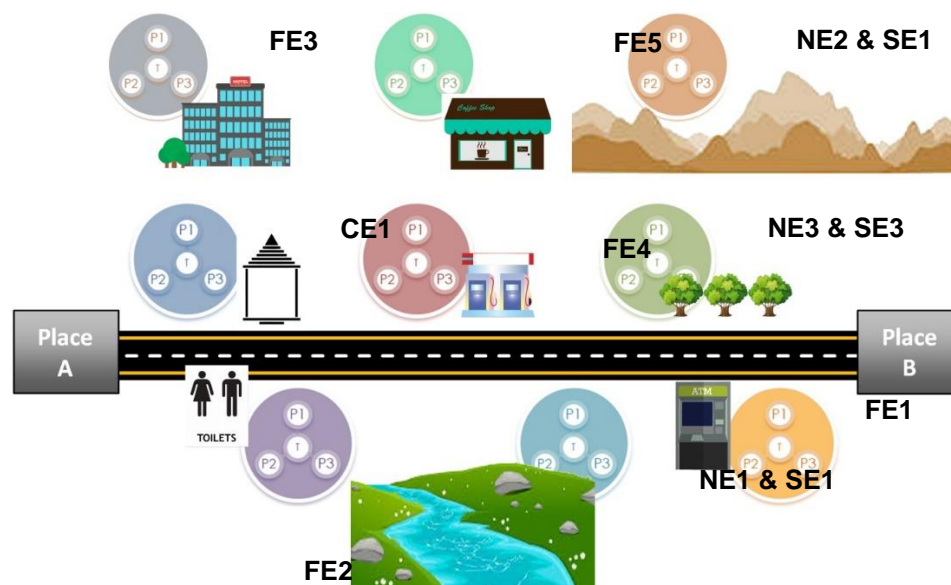


Figure 3 Hypothesized model of place identity b) Components of Place attachment

It is equally important to understand the speed of travel and the distance of possible observance. Figure 04 represents the angles of view in a horizontal spectrum for a driver and the gradation to show the clarity of vision. The driver can view the farthest areas as the speed increases and the nearest areas are then the blind spots. However as the speed reduced, the nearest areas are clearly seen than the farthest areas.

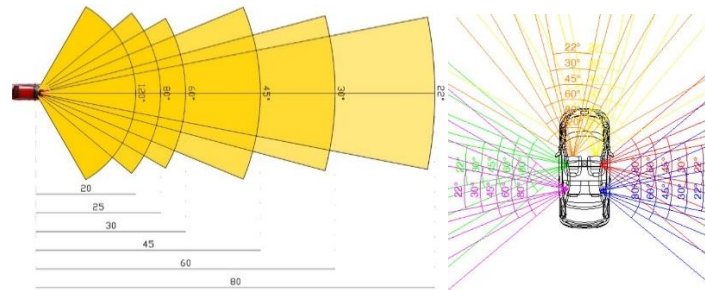


Figure 4 Horizontal angle based visual information spectrums a) for a driver b) for travellers

When a traveller, drives by himself, there is scope for reducing the speed in order to observe elements and areas of interest along the travel route. The accompanying travellers have more comfort of viewing than the driver, who has the focus of safety, time and distance to be covered. The travellers can observe in all the possible transparent surfaces; however, they note the opening closer to them. Certain areas of interest attract them to see on the other sides as well Figure 4 (b). For example, the highways on hilly roads show the rocky terrain on one side and the deep valleys on the other side. The travellers usually peak from the other windows at such viewpoints of interest.

Study area

The study route is a highway in India with a distance of 200 kilometers connecting a developing town and a two-tier city namely Manaparai and Coimbatore respectively. The roads connect many villages, towns, and cities of strong historic, cultural, commercial, and functional significance. The allowed speed limit is 60-100 km/hour. A number of natural, functional, cultural, and scenic elements appear alongside the road on either side. Figure 5 shows the locations.

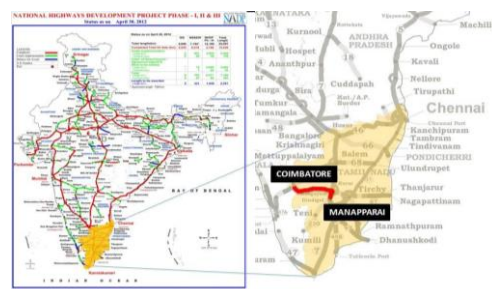


Figure 5 Maps showing the location of the study stretch in the state of Tamil Nadu.

Data Collection

The study has fair generalizability to both 2-lane and 4-lane highways. Physical observations along the roadway were marked on maps as direct representations of elements with a legend. The map showed the highest concentration of elements towards Coimbatore, and the elements were sparsest towards the villages and small towns (Fig. 4a). However, the resting point's midway between Coimbatore and the villages had more travellers who paused between their travel distance and duration. 250 Responses are collected using cross sectional survey

with Likert scale. Figure 6 shows the priority of people. The questions paramount for this paper are the ranking of the identified twelve elements along the route predicated on their degree of consequentiality to the particular element. The replication score ranged from five (very much needed) to one (not needed at all) for each question. Here are some replications suggesting group dynamism. Individual reasons, excursion, and work-oriented travel were the reasons that respondents verbalized for travelling the study stretch.

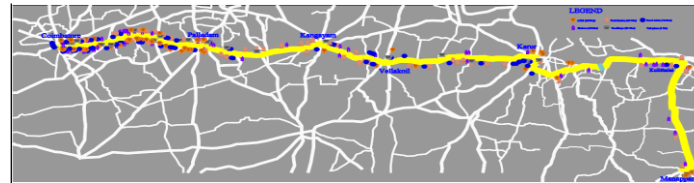


Figure 6 Location of identity elements in the study stretch

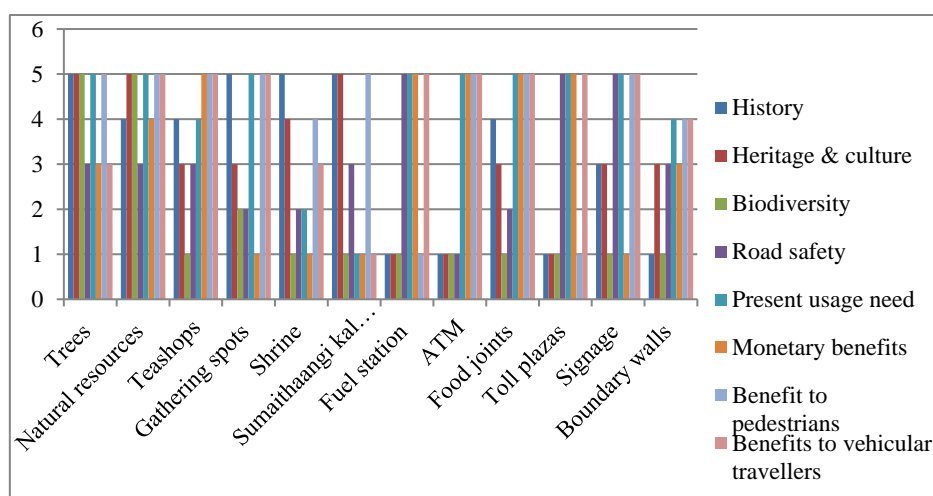


Figure 7 Author observations – Studied using Harvey balls and Likert scale method.

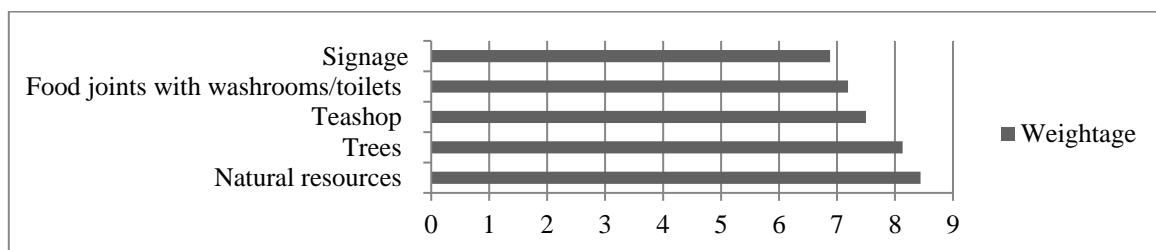


Figure 8 The top five results of the author observation method.

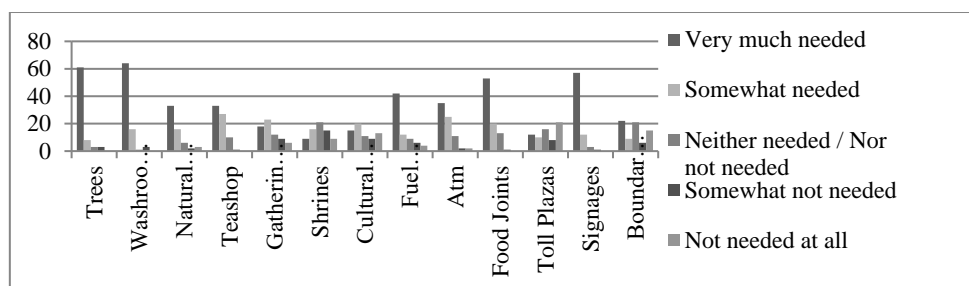


Figure 9 The respondents' ratings of need of identity elements

From the figures 8 and 9, it is obvious from the results that the present day needs of people expect functional spaces during travel. The results show that signs, washrooms, food joints, and teashops rank among the top priorities. People consider trees as a significant element, as functional element of shade more than the natural character.

IV. ANALYSIS AND RESULTS

Table 1: Correlations among identity elements

Correlations	1	2	3	4	5	6	7	8	9	10	11	12	13
Trees	1												
Wash room	0.880**	1											
Natural water bodies	0.715**	0.603**	1										
Tea shop	0.947**	0.808**	0.833**	1									
Gathering places	0.841**	0.715**	0.939**	0.932**	1								
Shrines	0.829**	0.703**	0.910**	0.924**	0.971**	1							
Cultural stones/features	0.782**	0.663**	0.952**	0.897**	0.977**	0.970**	1						
Fuel	0.922**	0.788**	0.906**	0.969**	0.973**	0.939**	0.934**	1					
ATM	0.972**	0.849**	0.818**	0.974**	0.913**	0.905**	0.882**	0.961**	1				
Food joints	0.877**	0.934**	0.706**	0.834**	0.775**	0.757**	0.735**	0.836**	0.872**	1			
Toll	0.709**	0.603**	0.900**	0.838**	0.941**	0.959**	0.969**	0.870**	0.822**	0.668**	1		
Signage's	0.988**	0.858**	0.744**	0.958**	0.858**	0.842**	0.805**	0.936**	0.974**	0.874**	0.729**	1	
Boundary walls	0.817**	0.699**	0.939**	0.915**	0.969**	0.968**	0.970**	0.936**	0.908**	0.769**	0.948**	0.841**	1

**Correlation is significant at the 0.01 level (2-tailed).

According to our table, almost all the variables correlated significantly with each other at the 99% confidence level. Culture is no less important for the majority of our respondents. The washrooms, teashops, and signs, with trees are significant also in the correlation matrix. The food joints are an important priority of most people. When testing our hypotheses using one sample t-test, the 15 variables showed a positive relationship with each other; and so, the null hypothesis was rejected (Table.2). The study variables significantly correlate with each other.

Table 2: Hypothesis test summary display asymptotic significances with significance level of 0.05.

Null Hypothesis	Test	Significance	Decision
The categories of trees occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of washroom occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of natural elements occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of teashops occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of gathering points occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of shrines occur with equal probabilities	One sample chi square test	.002	Reject the null hypothesis
The categories of cultural elements occur with equal probabilities	One sample chi square test	.001	Reject the null hypothesis
The categories of fuel stations occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of ATMs occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of food joints occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis

The categories of toll plazas occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of signage occur with equal probabilities	One sample chi square test	.000	Reject the null hypothesis
The categories of boundary walls occur with equal probabilities	One sample chi square test	.001	Reject the null hypothesis
The distribution of area is normal with mean 1.920 and standard deviation 0.95	One sample Kolmogorov – Smirnov test	.000	Reject the null hypothesis

V. DISCUSSIONS

Amalgamation of study elements

The grouping of elements provides a holistic experience to the traveller. The research suggests five elements from the survey results to be mandatory along with the existing features of the locations. The resting points with such amalgamation may enhance the experience of the traveler. These would enhance the place identity memory of the traveler, thereby increasing the sense of orientation along the travel route. The routes would become more interesting to the traveler if they were among the following categories or similar in nature as shown in Figure 10.

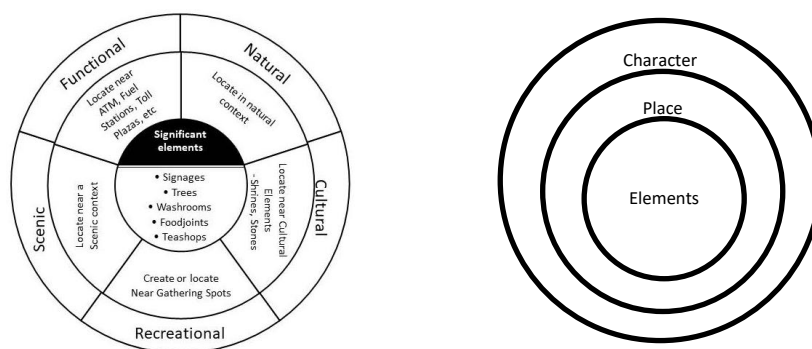


Figure 10 Elements place character diagram

Character

For a further analysis of the characters, three sites identified as rest points along the highway has been observed with reference to the identity elements. They are location 01: Iyermalai – a settlement with natural and cultural character, Location 02: Kulithalai – a settlement along a river, and location 03: Kongu mess-- a functional element (highway motel) near Karur. Among the three pause points, the first displayed functional characteristics, the second rest point was predominantly cultural and natural, and the third site represented scenic, cultural, and natural character. By juxtaposing the existing elements at these pause-points against the needed elements, the travel stretches can regain the place identity at various nodes. Categorizing the elements in

various pause points along the study stretch provides information on the character of elements present in the study area.

Location 01 (Figure 11) is an existing proper functional pause point along a busy highway connecting important cities in Tamilnadu. The Kongu mess, a functional pause point, is located 77 kilometers from the starting point. The motel has a teashop, bakery, hotel, restrooms, children's play area, and parking spaces for 25 cars. The fuel station abutting it also makes it convenient for travelers in private vehicles. Figure 12 shows location 02, a local context. This location is 34 kilometers from the starting point and has visual elements such as a temple on top of a huge rock with a temple tank nearby. The residents of the place have established many connections with these structures. From the point of view of a traveler interested in heritage culture, this might be an interesting spot to pause. Location 03 identified in the study is Kulithalai – a settlement situated along a river--42 kilometers from the starting point. Figure 13 shows location 03 with a temple and river with natural, scenic, functional, and recreational character. These areas have specific elements that constitute better site selection criteria to locate pause points or stopover areas along travel corridors. The correlation between the factors affecting perception of elements and the character of the pause points becomes especially important for planning and locating elements along travel corridors. The correlation between elements can help to decipher the distances for regular intervals and the speed of visual connection with the elements. The movement pattern is not only a visual syntax, but also a coherent expression of functional, ecological, and other contextual matters of identity.

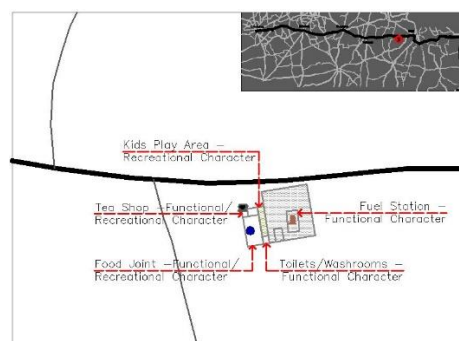


Figure 11 Functional character of Location 01

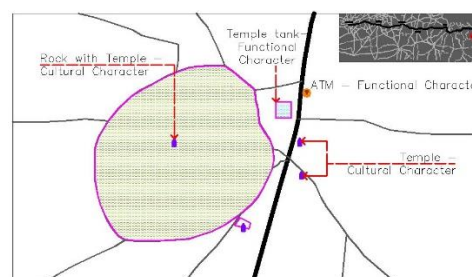


figure 12 Natural, scenic and cultural character of Location 02

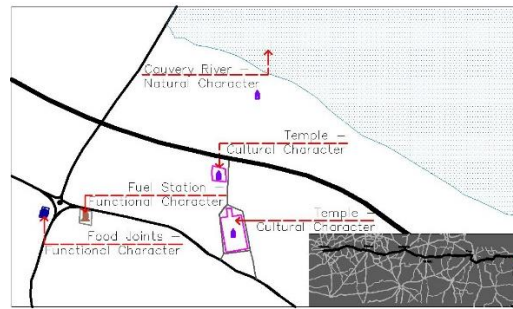


Figure 13 Natural, scenic and cultural character of Location 03

VI. CONCLUSION

Consideration of people's perspectives on the sense of place is indispensable to the planning and designing of stopover spots along the highways. An overtone of cultural, natural, and functional elements makes it obligatory in order to show highway riders the nature of place identity along their travel routes. The construction of rest points with information and character reflecting identity of the places connected at specific intervals should be mandatory. Highway planning strategies should include the importance of natural water bodies. The planting of trees and gardens and caring for them should be an integral part of design. Construction measures for restaurants and other gathering spots are to be eco-friendly. Teashops inculcate the culture of socializing with friends and colleagues, and our respondents desired to see more of these facilities along the route. However, the restructuring must suit the desiderata of the present generation of highway riders to ensure patronage of such efforts. Through this research, the continuing public need for introducing the desired identity elements or Reviving the existing elements along our highways enable to satisfy the continuing public need for introducing the desired identity elements, thereby building the character and a sense of place around the locations they pass by in their journeys.

The study further stressed the cultural importance of identity re-engenderment. To conclude, planning considerations should insist on paramount importance in the inclusion of identity elements to revive the cultural historic and social identity of the places with information and recreational facilities for the present generations and those to come. These identity element location equations help in retaining the cultural and heritage values of a place. This paper provides some good suggestions for exploiting notable landscape characteristic elements in creating a memorable scene in the traveler's mind. There are sites, which are rich in history and culture, or blessed with natural beauty such as a rock, river, pond, lake, or temple pond. The analyses in the various sample stretches clearly show the loss of place identity along highways and lack of insight in the planning guidelines.

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