



Extended summary

A Study and Design Proposal of The Network of Travel Wharf in Hue City and Surrounding Areas

Curriculum: Analysis and design of the architecture and the territory
(*Analisi e progetto dell'architettura e del territorio*)

Author

Hieu, Tran Dinh

Tutor(s)

Fausto Pugnali

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Abstract. The development of the tourism by waterway traffic based on the advantage of terrain and hydrographic is a significant and necessary solution to contribute promotion and diversifying forms of the province. Tourist activities in Hue City and across the province are indispensable of waterways tourist activities, because it is not only a characteristic of local people life but also indispensable scenery in the landscape of Thua Thien Hue Province tourism.

From the advantage of natural and historical conditions, the research subject is the comprehensive assessment for strategies and potential of tourism network in the province. Tourism potential will exploit based on hydrological systems, because this is a favorable condition to develop a network of tourist routes of province. Tourism routes network with system of rivers, lakes, lagoons, and coastline will connect with other travel network (including domestic sea and international sea, as well as the system of roads). They create a closed network and dual routes for all tourism systems of the province.

In addition, from formation of tourist routes network, transport network by waterways and system of travel wharf will connect the residential areas (city, town, township) and destinations along the rivers-lakes, lagoons and beaches system together. The travel wharf will also contribute to define important landscape point along the system of rivers, lakes, lagoons, and beaches.



Doctoral School on Engineering Sciences

Università Politecnica delle Marche

The development planning of the system of travel wharf is based on the planning of residential areas, tourist sites along the system of rivers-lakes, lagoons and coastline. In fact, the rivers, lakes, lagoons, coastline system intersects with the major roads system and water system intersects by itself (for instance the system of rivers to rivers; the systems of rivers to lagoons; the system of lagoon coastline). Moreover, many tourist sites will be an advantage condition to organize travel wharf with tourist activities, such as listening to Hue folk music singing (*Ca Hue*) or enjoying local foods.

To develop a travel wharf network systematically, the network establishment of tourist routes is basic elements of travel wharf network, because network formation of tourist routes is based on the tourist sites.

Tourism activities by boats are the typical tourist feature. It is indispensable of Hue City in particular and the Thua Thien Hue Province in general. Because traveling by boat always associate with canals, lakes, rivers, mountains, lagoons, and coastline. They are the natural elements are indispensable in tourist space of the province.

Keywords. Network, travel wharf, Hue city.



1. General assessment

In terms of road traffic systems aren't synchronal development, for to connect the local areas together and for meet the transportation needs of economic development, especially tourism potential development of the province. The tourist development by the waterway traffic on the advantage of terrain and hydrograph is a significant and necessary solution aim to promoting and diversifying forms of tourism in the province. Tourist activities in Hue City and also in across the province is indispensable tourist activities by waterways. Because, that is life characterization of local people and the indispensable scenery in the landscape image of Thua Thien Hue Province tourism.

From the advantage of natural conditions and historical conditions, the research subject is the comprehensive assessment for strategies and potential of tourism network in the province. Tourism potential will exploit based on hydrological systems, because this is a favorable condition for to develop the tourist routes network of the province. From the tourism routes network will develop based on the system of rivers-lakes, lagoons, and coastline, that will connect to the other travel network (including domestic sea and international sea, as well as the system of roads). All those create a closed network and dual routes for tourist routes in the province.

Based on the advantages of hydrological conditions, the research objective assess the tourism potential by waterways, as well as the development strategies of the travel wharf network in lagoons and rivers-lakes. Also, from tourist sites abundance along the rivers-lakes, lagoons and coastal areas such as: The historical tourist sites (as the works of victories in the war); The tourist sites of ancient architecture (including the ancient cities, temples, pagodas, mausoleums, the emperor tombs, individual tombs and traditional craft villages); The tourist site of religious-belief (including the temples, temple of village, communal houses and houses of worship); The eco-tourist sites (including the garden housing, eco-village, ecologic forest of mangrove in the lagoon, the beach stretches along the province and the ecologic island, sea) will be also the research objective of contents is mentioned. As well as evaluating the expansible capacity and development of the urban habitant areas in the province. Based on these major issues will be the basis for establishing a travel wharf network in the urban habitant areas, as well as tourist sites along the system of river-lakes, lagoons and coastal areas in the province.

2. Contents assessment

2.1. The real issue is limited and should resolve for operation of the wharfs and travel boats will be convenient

The system of bridges cross the river was built not the same time, so had all most the bridges were built not attention of the space for boats operates under the bridge. On the other hand, due to low technology and low investment, the distance of pillar, step of bridge is short, as well as height of bridge is restricted and is not equal (as high ranging from 4,7m to 5,6m in the dry season; 4,0m - 4,7m on medium rain season. While heavy rains, spatial heights under bridges are very low 3,3m - 4,0m). They don't safe that, boats can move convenience with the average number of the tourist.

Space of two sides of river banks has aggradations soil. It is encroached, obstructive view and to narrow river bed. The river flow has sediment, because a long time did not dredged and cause of the great flood. Those obstruct the water flow and the landscape - environment affection. It also impedes the travel boats moving.





The travel boat is not more interested of travel companies, for design investment of travel boats are suitable scales and standards for tourist transport by the waterway. The form and size of boats were designed not suitable for the tourists needs. Most the material composition of the travel boat is not friendly to the natural environment. This issue is feeling offence with the general natural landscape of the rivers. It also is irrelevant to the eco-tours routes (the tours route by waterways of Thua Thien Hue at now and near future)

Wharfs were spontaneously form, without planning, without standards, did not design, so most the wharfs hasn't pier connect between the tourists with boats. There isn't standard system for tourist service objects and don't improve the quality of tourism trade services.

2.2. The urgent problems need planning and improve the services quality of travel wharf system on the system of river - lake, lagoon, coastal areas

Current status, the traffic system of tourism service by waterways is not connected together between areas such as:

First issue, in the downtown, travel wharf network is not connected of a circuitous tourist routes, as well as the activities types are organized tourist sightseeing and enjoy the culture is not rich and unprofessional. The wharfs aren't organizational planning space for boat and service tourist, aren't design standards and investment regulations of the wharfs. So on the actually, the wharfs space doesn't meet standards of safety, hygiene, environment, as well as lower service quality and lack many trade conditions of the entertaining service needs of the tourists. The route network isn't connected from outside to inside the citadel. It is also a major limitation for tourism activities development of scenery sight tours and sightseeing in all the ancient monuments of Hue downtown.

Second issue, travel routes network by waterways isn't connected to downtown areas, to the lagoon areas and to the coastline. It was limited tours development of scenery sight and eco-tourism, as well as tourism services limit. On the decision of the province for economic development, that issue will not promote economic development in the localities of the province. The economic sources from the tourist industry aren't much income, as well as lower technical infrastructure and services in the adjacent areas of the rivers-lakes, lagoons and coastline will also slow development.

Third issue, to develop tourist industry and promotes tourist economic development in the province. The development form of traffic networks connect between the traffic networks together is the major issue and most necessary. Those two forms are major and basic traffic network of roads and waterways. The traffic network forms by waterways will be first choice. Because, it is low investment costs, the amount of freight is large. Besides the especial issue, in Thua Thien Hue has network density by waterways were even distribution throughout the provincial region and has lagoon system is long along the coastline and connected to the river, sea system. Lagoon system also is connected from the North to the South of the province.

Fourth issue, from the above characteristics, derives from historical conditions of the traffic by waterways for daily life activities of people. They were formed long time ago. The waterway was major traffic of goods transportation and carried peoples. It also is conditions for the value monuments on the territorial areas of the province are concentrated along the rivers-lakes system. Due to diversity of water sources as sweet water (rivers-lakes), brackish water (lagoon), salty water



(sea), so was formatted the ecosystem is diverse and rich. These conditions are also contributed to facilitate and tourists- services products diversify for tourist industry development of the province.

Finally, the traffic system development by waterways with the network planning of travel wharf is general transportation service of the province. Especially the travel wharfs for tourism development is a major condition of social and economic development promotion in most localities of the province.

3. Concrete solutions

3.1. Some new ways of travel wharf planning on the canal, rivers, lagoons

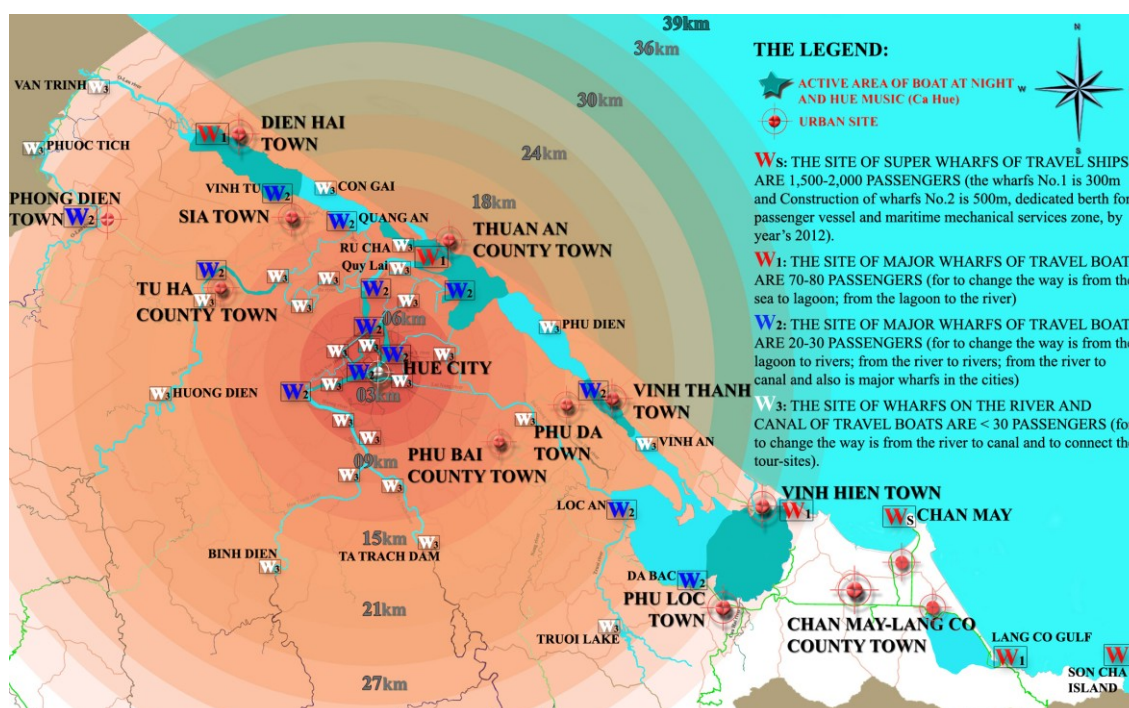


Figure 1. the map of planning areas of the wharfs is travel boats

Network planning of travel wharfs on the system of rivers, lagoons and the sea base on the hydrological system as (the rivers flow into the lagoon, before emptying into the sea - that means is the lagoon connect mostly the rivers system across the province, and the lagoon system is extended and located closely the coastline. It was formed two large marine outlet connect to the sea); The existent location of urban population was planned and it will be developed in the near future; The planning area has great potential in the tourism-service sector. Due to the activities space of marine area differed from the lagoon, lagoon space differed from the river and the river space differed from the canal. So the function as well as the size of the travel wharfs is also different and it will be formed with three travel wharfs forms as follows:



- The form of W_s : The super wharfs site of travel ships is 1500 – 2000 passengers (the wharfs No.1 is 300m and the construction of wharfs No.2 is 500m. They are dedicated for berth passenger vessel and maritime mechanical services zone, by year's 2012).
- The form of W_1 : The site of major travel wharfs are 70 – 80 passengers (for to change the way from the sea to lagoon and from the lagoon to the river).
- The form of W_2 : The site of major travel wharfs are 20 – 30 passengers (for to change the way from the lagoon to rivers; from the river to rivers; from the river to canal and also is major wharfs in the cities).
- The form of W_3 : The site of travel wharfs on rivers and canals are < 30 passengers (for to change the way from the river to canal and the other tour-sites connection).

Table 1. the wharfs form in the canals, rivers, and lagoon

Tour-site	Waterways	The wharfs form
The citadel inside	Ngu Ha Canal	W_3
The citadel outside Bao Vinh Ancient Street	An Hoa Canal	W_3
The citadel outside Garden House The house of worship	Ke Van Canal	W_3
The citadel outside Pagodas Ancient Street Quarter	Dong Ba Canal	W_3
Village Garden House The house is royal family Outside of Citadel	Bach Yen River	W_3
Ancient Bridge The house is royal family Traditional house House of Worship	Nhu Y River	W_3
Traditional Village Resort & hot spring	Pho Loi River	W_3
Temples Pagodas Tomb and Mausoleum Churches The house is royal family House of Worship	An Cuu River	W_3
The citadel outside Ancient Bridge Garden House	Huong River	W_2 and W_3



The house is royal family Ancient Town Ancient Street Pagodas Temples Tomb and Mausoleum Churches Landscape Eco-Tour		
Ancient Village Garden House House of Worship	O Lau River	W_2 and W_3
Eco-Village House of Worship Churches	Bo River	W_2 and W_3
Tombs of Civilian House of Worship Lagoon foods Eco-Tour Resorts	The Lagoon	W_1 and W_2
Beaches Seaport Island Corals	The Sea	W_s

Table 2. the boat style, the pier, the service in the wharfs is travel boat

The wharfs is W_3	The wharfs is W_2	The wharfs is W_1	The wharfs is W_s
Boat style: User small boats (single boat haven't engine carry 05 – 09 passengers or single travel boats have engine carry 10 – 19 passengers)	Boat style: User medium boats (double travel boats have engine or travel boats carry 20 - <30 passengers)	Boat style: User large boats (travel boats carry >30 – 80 passengers or travel ships)	Boat style: User travel ships carry 1500 – 2000 passengers
The Pier: 01 unit of pier is 08 boats or 01small unit of pier is 02 boats (for on canal)	The Pier: 02 units of pier is 08 boats	The Pier: 02 units of pier is 08 boats and 01 pier is 06 boats	The Pier: 02 wharfs for travel ships and cargo ships



Multi- traffic: Connect from boat station to another place by foot and bicycle	Multi-traffic: Connect from boat station to another place by foot, bicycle, motor bike, cars and single boats carry 05 – 09 passengers and 10 – 19 passengers	Multi-traffic: Connect from boat station to another place by foot, bicycle, motor bike, cars and travel boats carry 20 - <30 passengers	Multi-traffic: Connect from boat station to another place by foot, bicycle, motor bike, cars and travel boats carry >30 – 80 passengers
Service: The kiosk and the shop	Service: The kiosk, the shop, and restaurant	Service: The kiosk, the shop, restaurant and motel or resort	Service: The kiosk, the shop restaurant and hotel or resort

3.2. Some new ways of spatial renovation of the canal, rivers, lagoons

The space along the river banks is a link between of life activities space on land and of life activities space on the water surface (both elements are the urban space part, particularly for Hue urban area). So to meet the life activities need of people, particularly tourism activities and recreational needs of the people. This necessary condition is spatial development renovation of two canals, rivers, lagoon and beaches. Besides, should bring these spaces into the public spatial category (not allow house construction and not use the private spaces individually).

The design, construction of bridges cross canals, rivers, and lagoons must have the suitable solution for the activities under the bridge space. It is meaning that spaces under bridge must safe convenient activities for many travel boat scale with the high level such as: necessary condition must have minimum spatial height of travel boat scales on the canal is from 3,5m to 5m. It ensured the passenger capacity of boat from 5 to <20 people. On the river is from 5m to 6,5m. It is ensured the passenger capacity of boat from 20 to 30 people. On the lagoon must have a minimum high space of bridge is from 7m to 9m. It is ensured the passenger capacity of boat from > 30 to 80 people.

3.3. The planning model of the travel wharf network in the river of Hue City

Network planning of the travel wharfs in the Hue downtown and urban surrounding area base on the hydrological systems (such as flow way, circuitous tours-routes and intersectional point. It connect the routes on the river system, the major tourist attraction sites; the connection with other traffic systems in the various types formation of tours-route; the location distance of the travel wharfs is suitable for both sides of rivers and canals space (propose the their distance from 500m to 1000m on the canal system and from 1000m to 2000m on the river system. In addition, depends on the actually terrain should be planned alternate arrangement between the major stations on the canal and their distance of from 250 to 500m). The major central stations with the coordination function and tours-routes way change. They will be arranged at a convenient location for the different type connection of traffic and convenient change of the traffic way. This space



area is suitable for the wharfs scale, the wharf capacity and the fair distance of wharfs location.

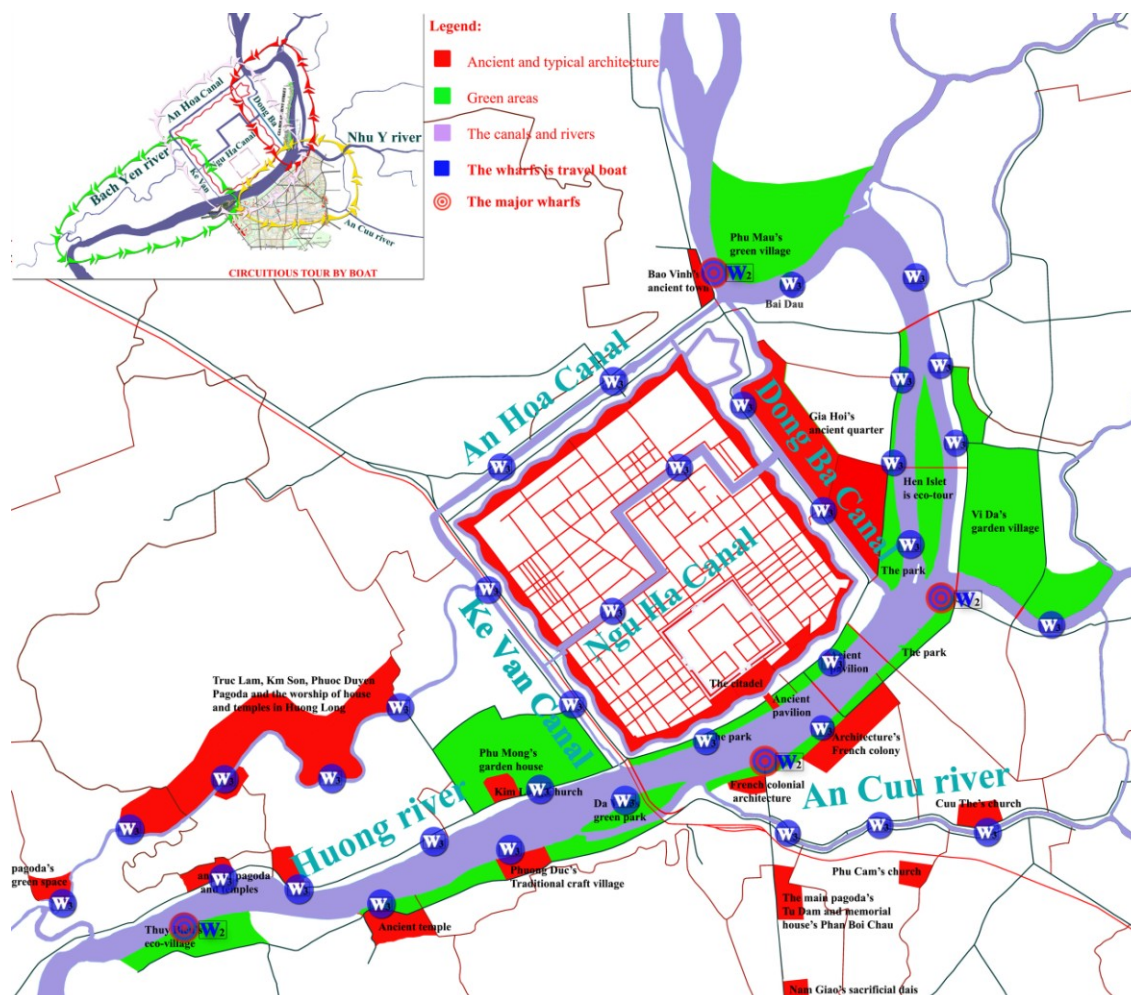


Figure 2. the map of the major wharfs in the canals and rivers of Hue City

4. The conclusion

The network development of the waterway tours-route by travel boat is diversity objective of tourism-services, tourism types, and local tourism characteristics with diversification development of traffic system and activities diversification in association areas with water surface space.

Tourism development associate the economic growth and of urban spatial development.

The travel wharf network in the areas is classified three service levels, three different scales in the downtown area. It is divided into two service levels, two different scales. The location of major travel wharf in the downtown area should be convenient connections with other roads. The architectural form and travel wharf style is suitable for landscape space of Huong River in downtown areas, because these where has a lot of ancient



buildings. These monuments have great value impress on the architectural artistic history (the architecture of Hue Citadel, French colonial architecture,...) and especially the space of architectural heritage complex in Hue City. In the minds of the Vietnamese people in general and Hue people in particular, the lotus flower image represent the purity, lightness and it is always associate with the water surface space. These elements have been exploited and used to create the service works model of the passenger, visitor in the travel wharf. It will aim to ensure service quality in all weather conditions and the advantage for the passenger, visitors.

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