Rene Luis S. Mata <sup>1</sup> matareneluis@yahoo.com

Dani Josef C. Cuaresma
Edgar Nonato G. Cusi
Gerard Michael D. Dy
Mary Ann R. Feliciano
Frances Joy S. Francisco
Crisanto B. Lustre III
Claudia Isabelle V. Montero
Jayson B. Portem
Manuel Agustin Z. Singson
Ivy Sychelle B. Tablante
Marianne Claire V. Vitug <sup>2</sup>

### I. Introduction

This study is a cumulative effort of two Architectural Design Classes in Master of Architecture of the University of the Philippines College of Architecture from school years 2011 to 2013. The study team composed of 11 graduate students and had a mix of various disciplines: 9 students from the Architectural Science track specializing in Architectural Heritage Conservation and 2 crossenrollees from the Urban Design and Community Architecture. One of the students was also employed in a government conservation agency thus, providing the group with further insights on the local problems that beset the architectural conservation profession. Experience

The study team, collectively named the *PAMANA* Group, was tasked to produce architectural conservation recommendations to an actual heritage site as exemplified in one of its more significant street ensembles, long declared as such, but with little resulting interventions since its declaration. Although this is not necessarily unique to the city, or the region, the site presented unique problems distinct to its Visayan character and "Spirit of Place".

The project was undertaken in partnership with the local *barangay* unit (the basic political unit in Philippine governance) of Brgy. Poblacion II, City of Carcar, the Carcar Heritage Conservation Society, individuals such as Mr. Manny Castro, owner of *Balay na Tisa*, and Mr. Jerry Martin Noel Alfafara of *Ang Dakong Balay* – both ancestral houses dating from the Spanish Colonial Period, as well as the incidental population conducting social and economic correspondence with the local community.

The first phase of the study covered a documentation plan of a heritage house, *Ang Dakong Balay* (Don Florencio Noel House), located at Sta. Catalina Street in Carcar, Cebu. Carcar was declared through local ordinance as a Heritage town. Much of the background for this paper was thus gleaned from this, and included much of the town's earlier history and morphology.

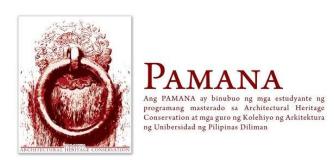


Figure 1. Class PAMANA logo

In the second phase of the study, the team concentrated on a single street, whose undeniable heritage quality and significance would be a good example that other neighborhoods could emulate in the future. In addition to what was started by the first study group, it was decided

in research and cultural studies made the contributions of the Art Studies members invaluable in capturing the local "Spirit of the Place" (Garnham, 1985). Architectural conservation is, in truth, multidisciplinary – as successfully proven by this class exercise.

<sup>&</sup>lt;sup>1</sup> Rene Luis Mata obtained his BS Architecture degree at University of the Philippines Diliman and Masters in Architectural Restoration and Rehabilitation of Patrimony at University of Alcala-Henares in Madrid, Spain. He is the Head of History, Theory & Criticism Studio Laboratory of UP College of Architecture. He is also a member of the Guru Council of the Heritage Conservation Society and Vice President of the Board of International Committee on Monuments & Sites (ICOMOS) in the Philippines.

<sup>&</sup>lt;sup>2</sup> Dani Josef Cuaresma, Edgar Nonato Cusi, Gerard Michael Dy, Mary Ann Feliciano, Frances Joy Francisco, Crisanto Lustre III, Claudia Isabelle Montero, Jayson Portem, Manuel Agustin Singson, Ivy Sychelle Tablante, and Marianne Claire Vitug are graduate students of Architectural Heritage Conservation from UP College of Architecture under the mentorship of Professor Mata.

Rene Luis S. Mata, et.al.

to continue the documentation to cover the entire stretch of Sta. Catalina Street for initial town character readings, and in addition, focus on one of the oldest houses in the neighborhood, the *Balay na Tisa*, to give an additional example of architectural conservation documentation. However, it was interesting to note that the street's heritage resources included numerous fine examples of American Colonial and vernacular residences that needed to be contextualized and interpreted within the general character of the site. A few examples of Modernist heritage structures worthy of mention complemented the challenge.

This study sought to address conservation at the grassroots level, instead of relying on the dictates of local governmental bureaucracy. The recommendations and interventions seek - as aid for local residents and barangay officials - to formulate projects that can be achieved and "repackaged" according to the requirements of local government unit proposals for funding, as recommended by the Local Government Code. Funding proposals for conservation, being a new concept, necessarily fall under 'development and beautification' are categories, which almost unrecognizable from tourism.



Figure 2. Balay na Tisa

The important factor in such strategy is to strengthen the sense of ownership in the stakeholders who decide the future of such heritage sites: the real stakeholders get to value their own heritage resources. This creates self-identity and pride. It is also important for the heritage neighborhood to realize the intrinsic value of sociocultural practices as the reason behind the existence of such heritage sites as stages for their practice, and the main reason for any physical and/or architectural heritage conservation.

It is the way of life that has engendered such heritage sites, and not the other way around. The future use, and reuse of such heritage resources must take into consideration the revitalization of the local social and cultural life – in this case its street-life as well – that will ensure its conservation and preservation. By this academic, though practical, exercise other architectural practitioners may be inspired to replicate this in other regions as well.

Significance of this study rests on continuing initial documentation and drawing up physical plans which can be a basis for future heritage conservation plans in Carcar. Although the project is adjunct to the previous study done in 2011-2012, large-scale streetscape documentation is a more comprehensive step towards site conservation as against individual resources only. This initial report and recommendations also greatly contribute to the future plans of the city to include heritage zones in planning and budgetary allocations.

The study is hinged on previous studies regarding restoration and conservation works, as well as the concept of the "Spirit of the Place". Roberto Luciani in his book Il Restauro: metodi e istrumenti di una "eccellenza" Italiana tra arte, scienza y tecnologia, narrated the essence of restoration by explaining its origin and place in history. This part may help in pinpointing the beginnings of conservation awareness in a Philippine community. He also proposed the idea of "awareness" as equal to, and the absolute platform of restoration. Consciousness is equal to initiative and sustainability which is the sustaining force behind every conservation project in a community. He also put forward the major aspects of restoration, like enumerating the scientific process and the main points/rules in restoration including the roles, rules and basic foundations on how to start a restoration project. James Fitch, together with co-author Fielden, in his book Conservation of Historic Buildings (2003) dealt largely with the concept of the role of curation and organization of preserved historical structures in a particular space in maintaining comprehension and sustainability in a heritage site.

Similarly, Dana Arnold specialized in "reading" structures/ building history in his book *Reading Architectural History*. He partnered with Ballantyne in 2004 in another book entitled *Architecture As Experience: Radical Change in Spatial Practice*. Arnold and Ballantyne took the historic approach by looking at architecture in reference to its significance, importance, timeline and influence. They also suggested the idea of architecture as an experiential phenomenon rather than an instrument of experience. More than just signifier, it is signified.

In contrast, Bernard Fielden in his own book (Third Edition ed.) tackled the basic idea of conservation in relation to history and significance. Therefore, the great consideration according to Fielden is conservation by significance and contribution, not for anything else: The context and nature of the specific site is not paramount in its essential conservation in terms of sustainability and ownership.

Arkitekturang Filipino: A History of Architecture and Urbanism in the Philippines by Architect Gerard Lico approaches the wide scope of Philippine architecture using the historical method. He discussed the development of Philippine architecture from the precolonization period up until the recent developments in architectural modernism. A very keen writer on the influences of foreign colonization in Filipino space configuration from the vernacular balay, fale of the Ifugaos, the stilts of the Samal Badjaos to the evolution and creation of the bahay na bato, the tsalet and the linear patterns of the Philippine Modernist movement, Lico is

helpful in understanding 'Filipino' spaces and configuration.

Of the few books already written about Filipino Colonial ancestral space and its antecedents, Fernando Zialcita and Martin Tinio's *Philippine Ancestral Houses*, 1810-1930 has proven to be one of the most comprehensive documentations of Philippine ancestral houses. The book does not have an extensive analysis and critique of Philippine space, but records the basic ground rules of "Filipino" colonial residential spaces. This reference was a very rich guide to the initial documentation of the Spanish Colonial era *Balay na Tisa* in Carcar, Cebu.

The basic framework of the study was patterned on the processes suggested by Garnham's book, *Maintaining the Spirit of Place: A process for the preservation of town character.* Garnham exhausted the possibility of augmenting the so-called "spirit of the place" as essential to the maintenance of the character and life of a certain place or space. Garnham discussed this process alongside conservation and community development.

All the above studies were put together in relation to the suggested site's unique character and context in order to better "read" its problems and their relation to the community's proposed reconfiguration as a sustainable heritage resource.





Figures 3 and 4. Ang Dakong Balay

### II. Process and Findings

Unique because of its distinct character as a heritage site in the Province of Cebu, Carcar is located 40.3 kilometers southeast of Cebu City and bounded by the Bohol Strait in

the east, by municipalities of Aloginsan and Barili in the west, Sibonga in the south and San Francisco in the north with a total population of over 100,000. The city is subdivided into 15 barangays, namely: Bolinawan, Buenavista, Calidngan, Can-asujan, Guadalupe, Liburon, Napo, Ocaña, Perrelos, Poblacion I, Poblacion II, Poblacion III, Tuyom, Valencia and Valladolid. It is hailed as a Heritage City of the province, with heritage structures from the Spanish colonial period to the most recent American colonial and contemporary periods. Carcar cityhood was challenged when it was demoted by a ruling in November 2008 because of the reason that it did not reached the annual income qualification of being a city. Rigorous appeals were made and finally in 2011 the Supreme Court upheld the decision of making Carcar a city along with other 15 municipalities of the country.

Carcar is considered one of the oldest settlements in the province of Cebu. First of the settlements originated from Sialo, a seaside community settlement at the Minag-a River delta. It is where the first trading occurred with the Chinese and other Asian visitors. Exchange goods like Chinese wares were bartered for local farm and forest products. The place was also called Daang-Lungsod, but changed to Valladolid when Spaniards arrived in the mid-16th century. Valladolid became a town in 1599 and St. Catherine of Alexandra was declared the new patroness. The community's economy grew steadily, attracting pirates and raiders from the south that stole food and other farm products and goods. Historians considered it as the worst pirates' incursion in the entire history of Cebu. Mowag, a new settlement was established with connected roads that branched out to different directions. Kabkad was the alternate name given by the people of Mowag to the new place. The word came from Kabkaban, a fern species which was abundant in the place.

In the main poblacion of Carcar, Sta. Catalina is the street opposite the town's Roman Catholic Church. A prominent house known as the Sato or Jaen house marks the street from the intersection. Sta. Catalina is part of Brgy. Poblacion II and has four blocks. The traditional street of Sta. Catalina is now paved in concrete. Lush tropical vegetation is evident along each side of the road. The street has a very unique character because of the diverse concentration of structures old and new of cultural heritage value. Houses dating from the late 1800s to the 1980s profile the street. The street is highly residential in nature with some commercial establishments such as local banks and internet shops and small variety stores on the ground floors of some of the larger heritage houses. Sta. Catalina has three declared heritage structures, namely, the Mercado Mansion, Ang Dakong Balay and Balay na Tisa.

Unnoticed, however, are the many vernacular structures and the interesting residences of Modernist heritage value of the 1950s that complete the ensemble. These modest architectural gems more than represent the heritage of the street – they showcase indigenous solutions to urban tropical situations dictated by neighborhood dynamics.

Rene Luis S. Mata, et.al.

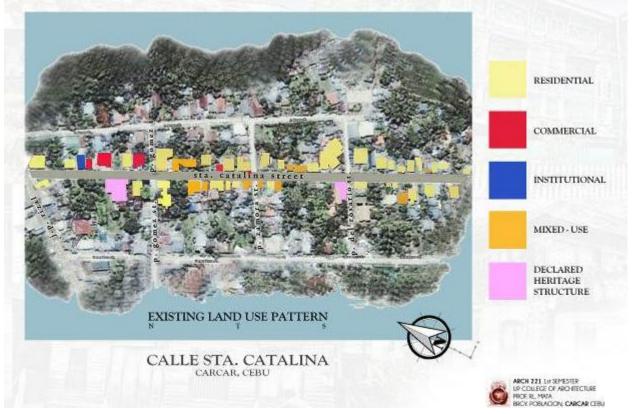


Figure 5. Key map of Sta. Catalina street. Source: Local Government of Carcar City

Balay na Tisa at present is owned and maintained by Mr. Manuel Valencia Castro and Mr. Marc Valencia Vanzwoll, fifth generation of the Sarmiento-Osmeña-Valencia clan.

Built in 1859 by the couple Don Roman Sarmiento and Doña Ana Canarias, this ancestral house which is popularly known as Balay na Tisa today, still has its original tisa (teja - terra cotta) roof tiles and details. Balay turned 150 in 2009, hailed as the oldest ancestral house in Carcar. It is said that its high pitched roof belies Chinese influence. During the time that the church was built, the owners actively participated in the construction. Don Roman acted as a foreman and Doña Ana and the women took care of the food for the workers. The house was then inherited by one of their daughters Manuela who married Don Jose Osmeña and passed on ownership to their only child Catalina who married Dr. Pio Valencia. The house is well maintained and is still used as a place of family reunions every time there is a celebration like holy week, fiestas and Christmas.

Balay na Tisa is one massive ancestral house with foundations made of coralline limestone, hardwood for the entire second level and terra cotta tiles for the roofing over hardwood trusses. Features like wide windows make it more adaptable to the tropical weather. At present, the main access to the house is through an old kitchen with distinct masonry called tabique pampango, a walling technique made of woven sawali plastered with lime plaster said to be of crushed seashells mixed with molasses and egg white. The changing street elevation has rendered the main entrance impractical as ingress point. The spacious living and dining areas are paved with tugas

and *balayong* wood planks flooring put together alternately; this also extends into the bedrooms. Tin metal pressed ceilings are found at the *sala* (living room), fashionable in the late 19th Century. *Calado* pierced screens and transom dividers decorated the second floor interiors. The open terrace or *azotea* adjacent to the kitchen has decorative concrete balustrades and flooring of *baldosa* clay tiles. Furniture is now mostly recent additions in the style of the period, except for some fixtures. At present, *Balay na Tisa* is one of the prominent ancestral structures in Sta. Catalina and perhaps the whole of Carcar, with a heritage house marker by the National Historical Commission of the Philippines (NHCP).

General objectives were drafted to guide the group before digging in to the actual field work in Sta. Catalina Street. The main goals of the project include the following:

- To develop a model plan for conservation and restoration, to be used by LGUs in proposing a long term development plan for a heritage zone (albeit as beautification and/or tourism);
- (2) To document and identify problems confronting heritage zones;
- (3) To create, if not elevate, the level of awareness of the community with regards to heritage conservation and restoration and to enable them to understand their uniqueness and identity as a heritage resource;
- (4) To include and involve the immediate neighborhood as direct beneficiaries (in conservation projects); and

(5) To be able to introduce the idea of sustainability which will become the basic platform for tourism and promotion of the heritage zone in the future.

Specific objectives for streetscape documentation as further feedback:

- (1) Create an initial technical documentation of Sta. Catalina streetscape;
- Evaluate the liveability of the Sta. Catalina street in conjunction to its characteristic as a heritage zone;
- (3) Survey the heritage structures within the street and identify all street furniture existing in the area;
- (4) Identify the problems confronting heritage zones and structures with regards to geodetics elevation, flooding, and proposed government road widening projects;
- (5) Create initial recommendations which will be presented to the local barangay unit of Sta. Catalina, as the basis for a short-term conservation plan, but towards an awareness of the possibility of a bigger master conservation plan;
- (6) Suggest immediate "first-aid" solutions for the existing problems in conservation which can be implemented by households and the proximate neighbourhood; and
- (7) Suggest an education guide focusing on awareness and sustainability in neighbourhood conservation.





**Figures 6 and 7.** Old and new photos of Sta. Catalina street. Source: from private collection of Jerry Martin Noel Alfafara (old photo above)

For the Balay-na-Tisa physical documentation, which should present another example for *architectural documentation towards eventual conservation*, (the *Dakong Balay* having already been presented in the previous project) the objectives were as follows:

- (1) Create a full blown documentation of the structure which includes plans and details;
- (2) Identify existing conditions and point out problems contributing to the decay of the structure;
- (3) Create a documentation plan and suggest immediate solutions to apparent problems; and
- (4) Recommend measures on how the structure will be scientifically preserved and protected on a long term basis.





**Figures 8 and 9.** Old and new photos of Balay na Tisa. The rise of the street level from the old times is apparent. Source: from private collection of Jerry Martin Noel Alfafara (old photo above)

Issues were identified by the study team upon the initial documentation of *Balay na Tisa* and Sta. Catalina street, and augmented by interviews of the townspeople done by the group with local barangay unit officials in support throughout the duration of the fieldwork.

Technical Group I was tasked to document the physical dimensions and present condition of the ancestral house as prototype to complement the documentation plans made by the earlier group on *Dakong Balay*. There proved to be a different set of problems encountered in *Balay na Tisa*. Mr. Manny Castro, the co-owner of *Balay na Tisa* shared the problems encountered by this 150-year old house. Through the years, the increased elevation of the

Rene Luis S. Mata, et.al.

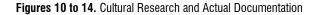
road has left the house foundation and ground floor level already 0.70 meters below the street. Another serious issue confronting *Balay na Tisa* was the deterioration of wooden structural and finishing components, especially in the kitchen area and inside the rooms; in contrast to the living room, the dining room and the *ante sala* areas that remained relatively stable. Pulverization was also observed in the stone foundations, probably brought about by natural ageing.

Technical Group II observed and documented the Sta. Catalina street. On both sides of the said road, one could see the progression of architectural styles in the Philippines. From Spanish colonial houses or Bahay na Bato to American period-style houses, and even old vernacular houses, this characteristic eclecticism in terms of aesthetics makes the place a novelty. Walking along Sta. Catalina is a tour of Philippine colonial architectural history. The journey starts from the main highway, where you are greeted by an old aquamarine painted mansion. The majesty of the structure connotes that in times past, this place, was where the rich and the powerful resided. Farther down the road, the street is dotted with other Spanish colonial houses. One could already see the distinction between architecture of the Visayan Islands with that of Luzon's own version of the bahay na bato. In the Visayas, they utilized limestone as the available material.

Interestingly, American period houses co-mingled with the *bahay na bato*. With houses that feature Art Deco and Art Noveau motifs, this affirms the elevated status of the town. People then or even now, had the resources, to experiment with different styles that were fashionable during certain periods. Old vernacular architecture harking back to both the American period and Post World War II period, were also found. The interest in vernacular is in the indigenous perception and interpretation of period styles and built with local knowledge and technology.

The tactile experiences are also interesting. From the soles of the feet to one's fingertips, Sta. Catalina also offers a lot. The uneven pathways make for a memorable narrative. It somehow tells one the evolution of the entire town. Moreover, the townsfolk related that indeed the strip has changed façade proportions over the years. In fact, in some of the older houses, the doors now appear to be "diminished" in relation to their original heights. Some of the older structures remained in disrepair while some have been demolished.

Technical Group III did a socio-cultural mapping of the Sta. Catalina street. No history book could ever compare with actual recollections of old townsfolk. Interacting with the latter provide more insight than any exhaustive guidebook produced. For they, without the biases or any political agenda, could narrate their story with their community – their own special affairs with the town so to speak. From their narratives, one could weave the entire town's fabric.













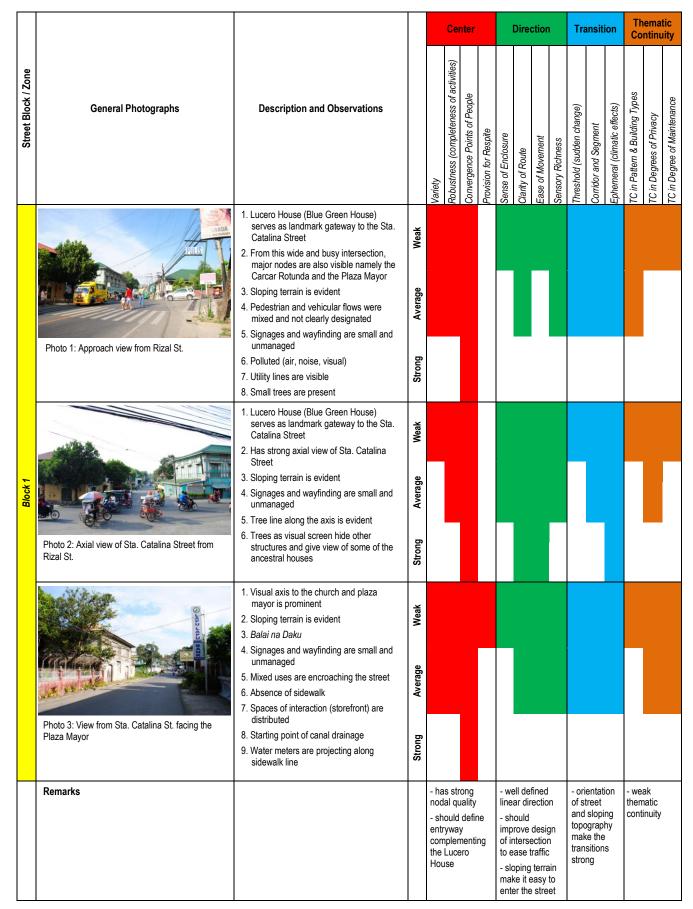


Figure 15a. Experiential Landscape Assessment Table for Block 1

					Center				Direction		ion Transition			Thematic Continuity				
	Street Block / Zone	General Photographs	Description and Observations		Variety	Robustness (completeness of activities)	Convergence Points of People	Provision for Respite	Sense of Enclosure	Clarity of Route	Ease of Movement	Sensory Richness	Threshold (sudden change)	Corridor and Segment	Ephemeral (climatic effects)	TC in Pattem & Building Types	TC in Degrees of Privacy	TC in Degree of Maintenance
		Photo 1: View of the first intersection facing Rizal St.  Note: very nice vistas and views available in this intersection due to preserved houses and	Three notable ancestral houses marked the intersection (highest concentration of ancestral houses in the whole Sta. Catalina Street)      Residential character but commercial activities encroaching      Visual axis to the Plaza Mayor still evident     Architectural character is preserved      Utility poles are evident     Various trees soften the edges     Absence of sidewalk     Clean surrounding     Gates and fences are introduced	Strong Average Weak														
:	Block 2	mix of textures and balance of trees and structures.  Photo 2: Street view showing Dr. Cui House approaching Zamora St.	10. Pedicabs are available along the street  1. Ancestral houses still present but in deteriorating conditions  2. Mixed uses evident  3. Smaller houses begin to appear  4. Eclectic architectural character begins to emerge  5. Smaller trees  6. Absence of sidewalk  7. Some residents extend their spaces on the street  8. Commercial activities spill over the street  9. Commercial signages are not consistent	Average Weak														
		Photo 3: View from Sta. Catalina St. showing responses to flooding	<ol> <li>Utility poles are present</li> <li>Some open canals were covered to provide access to property</li> <li>Architectural elements (fences with stairs) in response to flooding are evident</li> <li>Dilapidated ancestral houses are present</li> <li>Some vehicles were parked along the street</li> <li>Utility lines are present</li> <li>Absence of sidewalk</li> <li>Some residents extend their spaces on the street</li> <li>Commercial activities spill over the street</li> <li>Most of canals were covered</li> </ol>	Strong Average Weak Strong														
		Remarks			sen but the	wan	f area		dire con build but towa	od se ction sister ding h wane ards t ne blo	due int neigh id the ei	to t	- we defir stree	emer ct II ned et iagev		evid inter with pres 3 an hous wan	ence cestra ses, b ed at r end	on of al ut the

Figure 15b. Experiential Landscape Assessment Table for Block 2

					Cer	nter		[	Direc	ction		Tra	nsiti	ion		emat ntinu	
Street Block / Zone	General Photographs	Description and Observations		Variety	Robustness (completeness of activities)	Convergence Points of People	Provision for Respite	Sense of Enclosure	Clarity of Route	Ease of Movement	Sensory Richness	Threshold (sudden change)	Corridor and Segment	Ephemeral (climatic effects)	TC in Pattem & Building Types	TC in Degrees of Privacy	TC in Degree of Maintenance
	Photo 1: View of the sari-sari store at the Zamora St. intersection	1. Robust features on street, highest concentration of extended personal spaces on street 2. Places of convergence for neighbors are present, i.e. sari-sari store. 3. Sense of enclosure for house units evident 4. Mixed architectural character 5. Utility poles are evident 6. Ancestral houses present in the corners 7. Absence of sidewalk, obstructed 8. Canals start to appear stagnant	Strong Average Weak														
Block 3	Photo 2: Street view showing extended activities on street	1. Ancestral houses still present but deteriorating conditions 2. Mixed uses evident 3. Smaller houses begin to appear 4. Mixed architectural character 5. Smaller trees 6. Absence of sidewalk 7. Some residents extend their spaces on the street 8. Commercial activities spill over the street 9. Commercial signages are not consistent 10. Utility poles are present	Average Weak														
		<ul> <li>11. Some open canals were covered to provide access</li> <li>12. Unmaintained grass growth along the street</li> <li>1. Balai na Tisa as landmark of Architectural Heritage Street, in well maintained condition (the last ancestral house along Sta. Catalina)</li> <li>2. Utility lines are present</li> <li>3. Absence of sidewalk</li> </ul>	Average Weak Strong														
	Photo 3: View aproaching the Balai na Tisa	Blank lot beside Balai na Tisa used as basketball court     Big trees present     Residential character     Some open canals were covered to provide access	Strong Ave	- se	nse (	of are	•a	-1-					-1.		41		
	Remarks			esta the inte	ablish 2	ned a tions	t	direct of st obst the community comm	ar se ction reet, ruction cente to dential mero	on e on at er par al/ cial	nd	trandue inconstreint texts - we define street	se of sition to nsiste et ures II ned et iagew	s ent	conti	ming	

Figure 15c. Experiential Landscape Assessment Table for Block 3

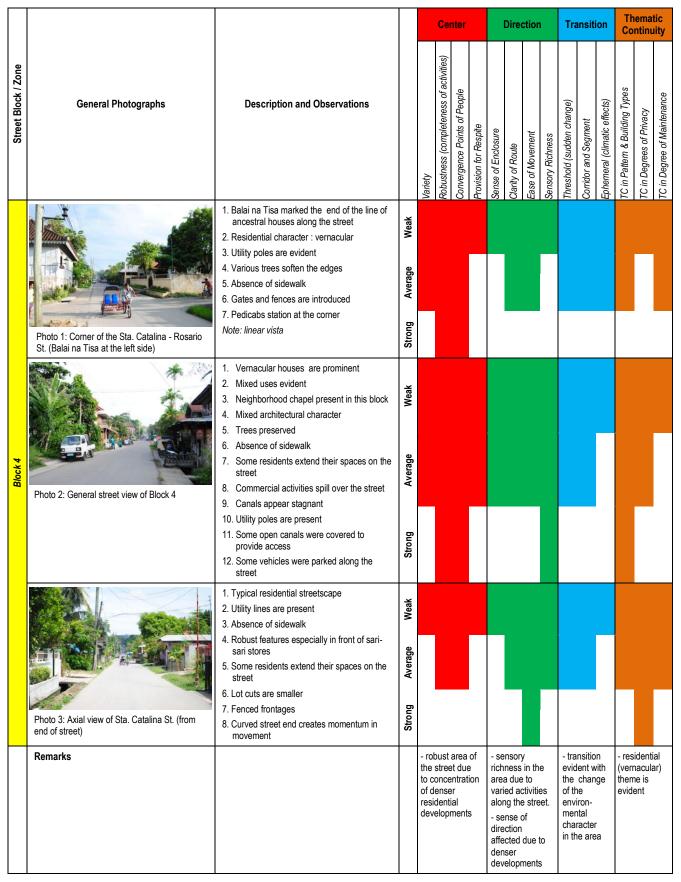


Figure 15d. Experiential Landscape Assessment Table for Block 4

But the research team was not only after the architecture of the strip, but the unique feelings or experiences only relatable to that place. Stories thankfully abound. With very limited literature, narratives were extracted from old time residents come up with descriptors on how Sta. Catalina should be felt.

The "unique" smells described in an earlier paragraph were also in Sta. Catalina. In the morning, one just needs to stand on the road and he or she could get a whiff of fresh breads coming out of the panaderia. The smell of coffee also pervades the horizon at this point. Complement it with smoke coming from burning wood and newly cut grass. There are stories that Sta. Catalina used to produce some of the best pastries in Carcar. One particular family, Josefa 'Epang' Noel Lakndazon had a bakery where treats like brazo de Mercedes, broas, Sampaloc, and other treats were produced. In fact, these people who shared these recollections still remember how good they were and how it brought an entire town to its knees when stocks were running out of the Lakandazon house pastries. So it must have been that the smell of freshly baked pastries that still forms part of that collective memory. Nowadays though, the smell of puffed sweetened rice or ampao (a resident mentioned that this Carcar favourite originated from Sta. Catalina) competes with pastry. Another one of those smells not really limited to Sta. Catalina, observed by us visitors, is the smell of burning wood interspersed with hot cooking oil. In fact, on some occasions, especially for the initiated nose the smell is unmistakeably that of pork cracklings or chicharon.

Touching some parts of the old houses on its own is already a separate category. The smooth texture of wood pronounces antiquity or age of the house and its furniture. The relatively smooth surface of lime stone implies skill in the entire construction process. The cold touch and brittleness of the *capiz* shells, make for, again an interesting experience.

The soul of Sta. Catalina though remains to be its deeply Catholic origins. Respondents from the strip say that up until now, grand religious parades or processions still bring back former residents from all over the world. It becomes more of a reason for coming home. Apart from religious practices, residents also mentioned times when they still had town dances. Those town dances invariably became the precursor of courtships which consequently led to interesting love stories, etc. Why it ended is a bit of a puzzle but definitely, it still lies imprinted in the minds of those who knew it that they know so well the decade when it ended.

There was also an interesting anecdote about how news was delivered in Sta. Catalina. They said, in the absence of periodicals, there was a boy (a town crier if you may), who would go about town and shout the latest headlines. With his drum in tow, people were just excited or anticipating of news outside of town. It was only about four decades ago, when this tradition, unfortunately was discontinued.





**Figures 16 and 17.** Class PAMANA meeting with local officials of the barangay

To consider people from Carcar, specifically Sta. Catalina, as proud of their heritage is a huge understatement. Respondents are in unison when proclaiming this. Reinforcing this notion is the fact that everyone was willing to share their story of the place. Everyone seems to know everybody else. Everyone appears to be familiar with the complex genealogies of old families. Everyone was uninhibited when saying they really knew their place.

There surfaced two different sets of problems that needed to be tackled by Group II. The first was the physical and climatic variables challenging the heritage resource. The second set of problems was the socio-cultural acceptability and sense of ownership of the community. This was to be tackled after consultation with Groups I-III in terms of Liveability and Quality of Life.

Studying Sta. Catalina Street teeming with history and rich cultural heritage also required comprehensive understanding of its present condition to be able to urgently address the posed threats that may compromise its authenticity and sustainability in the future. Sensitive to the context, methodical assessment tools that aimed to understand the street's present conditions were used. The street was divided into four sections, thoroughly photodocumented, measured and studied.

	Physica			
Existing Physical Elements	Vignette	Physical Description	Analysis	Recommendations
1. Street Wall Façade		The ancestral houses are concentrated on one side of the street. The street wall facade is not continuous due to different building uses, building heights, front setbacks, fence options, colors & style of architecture. There are lots that are also left open creating rough texture of street wall.	Different commercial establishments are created on the other side of street which resulted to mixed uses, incoherence of style and activity patterns. The inconsistencies in facade treatment and appearance may be caused by lack of design guidelines; some structures fail to follow provisions of the building code.	To formulate design guidelines on architectural and site development to be followed by residents     Reinforce properly the codes.
2. Street Carriageway		The street carriageway has good surface quality, made of asphalt, and without demarcation. Some areas are obstructed by parked vehicles. The road is wide enough to accommodate 2-way light vehicular traffic.	The new asphalt road was maintained properly and only light vehicles are allowed to pass.	Ban heavy vehicles to use the road.     Indicate road demarcation line.     Formulate design guidelines on speed humps (traffic calming) features.
3. Sidewalk		Sidewalks are occupied by extension of living and/or commercial activities of the residents. There is no clear delineation of sidewalk. Sidewalks are generally obstructed (in photo: signages, other street furniture). Sidewalks are in concrete finish, less elevated than asphalt road finish.	The sidewalk is not clearly delineated as "sidewalk", resulting to residents using it for their own purposes. There are no clear design guidelines on allowed street projections and abutments.	Propose barangay guidelines or community projects promoting landscaping of the street.     Preserve existing trees, through barangay ordinance.
4. Street Landscaping		The street landscape comprises of grass growth along the sidewalk. Trees are usually inside properties. Potted plants are also evident along the street.	Plants are not maintained by the barangay/community. There are no design guidelines for landscaping.	Clear the sidewalk of any private obstructions.     Propose design for streetscape redevelopment utilizing the sidewalk for public purpose (inc. treatment finish for sidewalk).     Formulate barangay ordinance for maintenance of street frontage.
5. Street Furniture		The street lamp as the only furniture is usually attached to the utility post. Other street furniture includes personal effects of the residents along their frontage.	Not enough attention was given to beautification projects of this street. Street lamp design may be improved to also promote street safety during night.	Propose design of lamp posts as part of beautification project of the barangay.     Introduce other street furniture needed. Architectural design should be consistent.
6. Street Utilities		Some street drainage canals are left open, some are covered with concrete slabs, and some are completely covered with concrete bridge for access to property. Water at canal is stagnant – slow flow. Water meters are jutting and obstructing the "sidewalks". Utility electrical posts are present.	Canals were clogged due to garbage, and poor capacity due to its outdated size. Poor maintenance of the utility post may result to fire damage to the houses in case of fire caused by electrical mishaps.	Promote cleaning and declogging of the canals. Cover the canal and make its surface part of the sidewalk development.     Increase the capacity of the street canal to lessen threat of flooding.     Revive the fire hydrants along the street.     Wirings and other cables must be thoroughly checked and be properly bundled to improve visual clutter.
7. Wayfinding & Information	Board Street	Wayfinding devices for the street names are absent. Only the declared ancestral houses have plaque and information.	Lack of design guidelines on street signage and wayfinding.	Propose design for street signs: sign post or sign attached to the building wall.

Figure 18a. Historical Streetscape Assessment Table for Block 1

Existing Physical Elements	Vignette	Physical Description	Analysis	Recommendations
1. Street Wall Façade		The street wall facade is not continuous due to different building heights, building use, front setbacks, fence options, colors & style of architecture. There are lots that are also left open creating rough texture of street wall.	The inconsistencies in façade treatment and appearance may be caused by lack of design guidelines; some structures fail to follow provisions of the building code.	1. To formulate architectural design and construction guidelines to be followed by the residents.     2. Strict adherence to, and enforcement of, the codes.     3. Vernacular houses should have proper setback clearances for safety purposes against fire.
2. Street Carriageway		The street carriageway has good surface quality, made of asphalt, and without demarcation. The road is wide enough to accommodate 2-way light vehicular traffic.	The new asphalt road was maintained properly and only light vehicles are allowed to pass. There is lack of pedicab stations.	Ban heavy vehicles to use the road.     Indicate road demarcation line.     Formulate design guidelines on speed humps and other traffic calming features.     Designate areas for pedicab stations.
3. Sidewalk		Sidewalks are occupied by extension of living and commercial activities of the residents. The sidewalks are not clearly delineated. Sidewalks are generally obstructed by water meters, electrical posts, vehicles, planters, and front benches of sari-sari store.	The sidewalks are not clearly defined this has resulted to the use of such sidewalks as extensions of the residents' wide variety of activities. There are no clear design guidelines on allowed street projections and abutments	Clear the sidewalk of any encroachment by private properties.     Propose design for streetscape redevelopment, repurposing the sidewalk as a venue for convergence.     Formulate barangay ordinances for maintenance of cleanliness and order.
4. Street Landscaping		There is an abundance of unmaintained wild grass along the sidewalk. Trees are usually inside property lines. Potted plants are also evident along the street.	Plants are not maintained by the barangay/community. There are no design guidelines for landscaping.	Propose barangay guidelines and community projects that will enhance the landscape.     Preserve existing trees through local ordinance.
5. Street Furniture		Lamp posts are the only prominent street furniture; other street furniture includes personal effects of the residents fronting their properties. Some stairs and ledges project to the street, and are used as seating spaces for late afternoon congregation among neighbors.	There is a noticeable disconnection between the prominent architectural style of structures along the street and the street furniture (lamp posts). There is no uniformity or design consistency.	Propose design of lamp posts as part of beautification project of the barangay.     Introduce other street furniture needed. Architectural design should be consistent.     Allow robustness/variety on the street, but have clear operational and maintenance guidelines.
6. Street Utilities		Some street drainage canals are left open, some are covered with concrete slabs, and some are completely covered with concrete or access to property. Water at canal is stagnant (slow flow). Water meters jut out of the properties onto the "sidewalks". Utility electrical posts are present.	Canals are clogged with garbage; they are of poor capacity due to outdated size. Poorly maintained utility posts are fire hazards.	Promote cleaning and declogging of the canals. Cover the canal and make its surface part of the sidewalk development.     Increase the capacity of the street canal to lessen threat of flooding.     Revive the fire hydrants along the street.     Wirings and other cables must be thoroughly checked and be properly bundled to alleviate visual clutter.
7. Wayfinding & Information	No provisions	Wayfinding devices are absent.	There is lack of government initiative to provide street signs and information markers.	Propose design for wayfinding devices.     Propose guidelines to observe clear sight lines, and signage design.

Figure 18b. Historical Streetscape Assessment Table for Block 2

	Physica			
Existing Physical Elements	Vignette	Physical Description	Analysis	Recommendations
Street Wall Façade		The street wall facade is not continuous due to different building heights, front setbacks, fence options, colors & style of architecture. There are lots that are also left open creating rough texture of street wall.	The inconsistencies in façade treatment may be caused by lack of design guidelines, neither the houses follow provisions of the building code, i.e. setbacks, bulding height, etc.	To formulate design guidelines on architectural and site development to be followed by residents.     Reinforce properly the codes.
2. Street Carriageway		The street carriageway has good surface quality, made of asphalt, and without demarcation. Some areas are obstructed by parked vehicles.	The new asphalt road was maintained properly and only light vehicles are allowed to pass.	Ban heavy vehicles to use the road.     Indicate road demarcation line.     Formulate design guidelines on speed humps (traffic calming) features.
3. Sidewalk		Sidewalks are occupied by extension of living and commercial activities of the residents. There is no clear delineation of sidewalk. Sidewalks are generally obstructed (in photo: repair shop).	The sidewalk is not clearly delineated as "sidewalk", resulting to residents using it for their own purposes. There are no clear design guidelines on allowed street projections and abutments.	Clear the sidewalk of any private obstructions.     Propose design for streetscape redevelopment utilizing the sidewalk for public purpose.     Formulate barangay ordinance for maintenance of street frontage.
4. Street Landscaping		The street landscape comprises of grass growth along the sidewalk. Trees are usually inside properties. Potted plants are also evident along the street.	Plants are not maintained by the barangay/community. There are no design guidelines for landscaping.	Propose barangay guidelines and community project promoting landscaping of the street.     Preserve existing trees, through barangay ordinance.
5. Street Furniture		The street lamp as the only furniture is usually attached to the utility post. Other street furniture includes personal effects of the residents along their frontage.	Not enough attention was given to beautification projects of this street. Street lamp design may be improved to also promote street safety during night.	Propose design of lamp posts as part of beautification project of the barangay.     Introduce other street furniture needed. Architectural design should be consistent.
6. Street Utilities		Some street drainage canals are left open, some are covered with concrete slabs, and some are completely covered with concrete bridge for access to property. Water at canal is stagnant – slow flow. Water meters are jutting and obstructing the "sidewalks".  Utility electrical posts are present.	Canals were clogged due to garbage, and poor capacity due to its outdated size. Poor maintenance of the utility post may result to dire damage to the houses in case of fire caused by electrical mishaps.	Promote cleaning and declogging of the canals. Cover the canal and make its surface part of the sidewalk development.     Increase the capacity of the street canal to lessen threat of flooding.     Revive the fire hydrants along the street.     Wirings and other cables must be thoroughly checked and be properly bundled to improve visual clutter.
7. Wayfinding & Information		Wayfinding devices for the street names are absent. Only the declared ancestral houses have plaque and information.	Lack of design guidelines on street signage and wayfinding.	Propose design for street signs: sign post or sign attached to the building wall.

 $\textbf{Figure 18c.} \ \ \textbf{Historical Streetscape Assessment Table for Block 3}$ 

	Physica				
Existing Physical Elements	Vignette	Physical Description	Analysis	Recommendations	
Street Wall Façade		The inconsistencies in façade treatment may be caused by lack of design guidelines, neither the houses follow provisions of the building code.	To formulate design guidelines on architectural and site development to be followed by residents.     Reinforce properly the codes.     Vernacular houses should have enough setback clearances for safety purposes against fire.		
2. Street Carriageway		The street carriageway has good surface quality, made of asphalt, and without demarcation.	The new asphalt road was maintained properly and only light vehicles are allowed to pass. There is lack of pedicab stations.	Ban heavy vehicles to use the road.     Indicate road demarcation line.     Formulate design guidelines on speed humps (traffic calming) features.     Delineate areas where are pedicab stations.	
3. Sidewalk		Sidewalks are occupied by extension of living and commercial activities of the residents. There is no clear delineation of sidewalk. Sidewalks are generally obstructed by water meters, electrical posts, vehicles, planters, and front benches of sari-sari store.	The sidewalk is not clearly delineated as "sidewalk", resulting to residents using it for their own purposes. There are no clear design guidelines on allowed street projections and abutments.	Clear the sidewalk of any private obstructions.     Propose design for streetscape redevelopment utilizing the sidewalk for public purpose.     Formulate barangay ordinance for maintenance of street frontage.	
4. Street Landscaping		The street landscape comprises of unmaintained grass growth along the sidewalk. Trees are usually inside properties. Potted plants are also evident along the street.  Plants are not maintained by the barangay/community. There are no design guidelines for landscaping.		Propose barangay guidelines and community project promoting landscaping of the street.     Preserve existing trees, through barangay ordinance.	
5. Street Furniture		The street lamp as the only furniture is usually attached to the utility post. Other street furniture includes personal effects of the residents along their frontage. Some stairs and ledges are projecting on the street and used as seating spaces and congregation during late afternoon.	Not enough attention was given to beautification projects of this street. Street lamp design may be improved to also promote street safety during night.	Propose design of lamp posts as part of beautification project of the barangay.     Introduce other street furniture needed. Architectural design should be consistent.     Allow robustness on the street, but have clear operational guidelines.	
6. Street Utilities	left open, some are covered with concrete slabs, and some are completely covered with concrete bridge for access to property. Water at canal is stagnant – slow flow. Water meters are jutting and obstructing the "sidewalks". Utility electrical posts are present.		Canals were clogged due to garbage, and poor capacity due to its outdated size. Poor maintenance of the utility post may result to dire damage to the houses in case of fire caused by electrical mishaps.	Promote cleaning and declogging of the canals. Cover the canal and make its surface part of the sidewalk development.     Increase the capacity of the street canal to lessen threat of flooding.     Revive the fire hydrants along the street.     Wirings and other cables must be thoroughly checked and be properly bundled to improve visual clutter.	
7. Wayfinding & Information	No provisions	Wayfinding devices are absent.	Does not have wayfinding and signage guidelines to avoid visual clutter.	Propose design for wayfinding devices.     Propose guidelines to observe clear sight lines, and signage design.	

Figure 18d. Historical Streetscape Assessment Table for Block 4

Rene Luis S. Mata, et.al.

### Liveability Index

The Liveability Index (Douglass, M., 2002) measures the conviviality of street life, quality of street serviceability and the health of its street environment. With an ensemble of characteristic ancestral houses, Sta. Catalina's street life proved welcoming and abundant with opportunities for social interaction. Small-scale enterprises dotted along the stretch increased mixed activities, but Sta. Catalina's serviceability was marred by an absence of proper sidewalks for the welfare of the pedestrians. Some private enterprises even extended to the public road which, if unattended, may eventually cause bad effects in terms of street abuse, traffic congestion and safety problems.

On the other hand, good air quality and proper waste management scored high as the residents made their street environment cleaner and healthier. The great threat discovered due to the sloping street topography was perennial flooding that is attributed to the silting and overflowing of the nearby river (caused by ill-planned developments upland) and the poor condition of storm water canals (due to insufficient volume capacity and clogging due to poor maintenance in some areas). The street thus got a moderately livable index.

Physical reconnaissance of the street included verification of land use that is generally residential. The Architecture of the ancestral houses in Sta. Catalina are unique and important though it was observed that the street profile was already inconsistent due to demolished ancestral houses, replaced by commercial and mixed-use buildings and contemporary houses. Lack of design guidelines became evident as physical street features like street signage, lamp posts and landscaping elements were inconsistent. Road carriageway quality was not good in the sense that roads were used both by vehicles and pedestrians: sidewalks were generally not yet delineated or blocked by commercial signage or informal extensions on the street. Utility lines also posed fire and safety threats to the ancestral houses. The physical conditions of the four blocks of Sta. Catalina were analyzed and sectional studies were produced to further understand the physical and socio-cultural relationships of the buildings with the

Experiential Landscape evaluation tools (Twaites, K. and Simkins, I., 2007) gave us idea on what can be kinesthetically experienced as one walks along the street. General findings for the street included good quality of access and sense of direction attributed to its straight configuration with five distinct intersections. The street's alignment with the plaza mayor and the church up to *Balay na Tisa* at the end of the street proved a very strong visual and contextual axis that established its direct importance to the historical development of Carcar. The first block upon entering the Sta. Catalina Street displayed a concentration of remaining ancestral houses which creates a sense of nostalgia as one traverses this area. The midsection along this stretch showed weakness of thematic continuity due to issues and challenges stated above

The documentation of the street served as initial data useful for further studies and basis for initial recommendation to arrest detrimental patterns of

development and urgent natural issues that posed a dire threat to the architectural heritage of Sta. Catalina. Less evasive design proposals focused on three points: delineating and clearing the sidewalk, improving the volume capacity of the street canal and, improving street signage and lamp posts to enhance security and serviceability of the street. Flooding may be a big challenge, as this required a macro site study of the river network, and a needed proposal to manage upland activities and river silt dredging.

### Physical Sustainability

According to the local barangay officials, Sta. Catalina street is subjected to the following problems:

Flooding. Problems of flooding are endemic during the usual rainy seasons and also during typhoons. During ordinary rainy days the street water level would reach an approximately 0.50 meters and as high as 1.20 meters. The local river system (the Poblacion/Carcar River) also contributes to the problem. Another factor is blockage and irregular clean-up of storm drainage. The proposed bypass road project, will also contribute to the flooding problem because the main outlet of the river will be blocked by the planned construction.

The study team also confirmed the problem as mentioned by Mr. Manny Castro. The street was raised as reported up to 0.70 meters above the original ground level of the heritage house. Drainage problems were thus exacerbated, since the water coming into the house from external forces would not run off naturally. The proposed peripheral road may have dammed flood waters from seeking the natural outlet provided by the river. However, all these may need further verification.

Road widening. Carcar City is one of the main thoroughfares of the province. All kinds of transport pass through Carcar from Cebu City to down south and vice versa. Recent developments to ease the problem of traffic congestion in the main streets of Carcar, road widening projects are in line. Because of this reason, old houses along the main high way particularly in the Sta. Catalina side will be much affected by the road widening project. This has been a problem with some structures and buildings identified as in danger of demolition, because Carcar has defined its heritage zones, but not implemented in full scale protection. The local government of Carcar has not yet implemented the recently approved Heritage Law and few are even aware of its existence.

### Socio-cultural

There was an apparent lack of awareness of the community's heritage resource and potential. Awareness is the key to sustainability, and the local barangay unit should take action to inform the community that in order to sustain its liveability and its potential as a repository of local socio-cultural life, they must involve all the residents in drafting future plans for Sta. Catalina's preservation of both tangible and intangible resources. To augment this lack of awareness, Educational guides should be in place for the benefit of both residents and visitors. A

Tourist/Visitor Information Center would be appropriate to include the education of visitors of the community's heritage resources. A regular checking and inventory of cultural resources of Sta. Catalina, both tangible and intangible heritage Research is crucial to sustain the soul of the community, for example, research in the food culture of Sta. Catalina especially the local delicacies and desserts should be highlighted, thus will start a new business anchored in history and significance. A local committee that will take care and focus on the development of a future conservation plan for Sta. Catalina has to be in place.

# III. Recommendations and Conclusions

After the presentation of the field work report and open forum with the local barangay unit of Sta. Catalina and the architecture students from the area, the *PAMANA* group finally came up with some initial recommendations for some questions and concerns of the local barangay officials.

These recommendations were formulated through logical discussions with the local barangay officials. Feasible solutions can be implemented immediately by the local barangay unit and the immediate neighborhood. These solutions can be considered as initial plans, therefore it would need close coordination with the LGU (Local Government Unit) or the City Government, the DENR (Department of Energy and Natural resources), the DPWH (Department of Public Works and Highways) and other concerned agencies and departments. Recommendations were classified into immediate or short-term and long-term solutions.

### Short-Term Physical Plan

- (1) Making/Enforcing an ordinance to ensure the safety and security of the place (including pavers, lampposts, and other street furniture);
- (2) Proper installation procedure; aside from enforcing the ordinance, the local barangay unit should channel the responsibility to the household in ensuring that the installed pavers within their respective frontage should be their responsibility;
- (3) Widening and increasing the depth of existing storm drain;
- (4) Dredging. Drainage Maintenance should be done quarterly; and
- (5) Minimum clearing of mangrove trees (excess growth) to give way to perennial flooding, as facilitated through an Environmental Impact Assessment (EIA).

### Long-Term Physical Plan

- (1) Embedded waste water sewer line to separate from the usual storm drain;
- (2) Provisions for a flood gate in order to prevent the excess counter flow of flood water;

- (3) Make initial study and survey to create a Water detention pond/basin that can double as a multipurpose open-air activity area for the community; and
- (4) Creation of a Physical buffer zone.

In the discussions with the community, the research group was told of the desire to declare Sta. Catalina Street as a heritage zone. There are limitations though. Before declaring a place as historically significant, there are parameters that have to be established, including protective buffer zones to ensure its integrity. A buffer zone is a well-defined zone outside the protected area whose role is to shield the cultural values of the protected zone from the impact of activities in its surroundings. This impact can be physical, visual or social. (The Valetta Principles for the Safeguarding and management of Historic Cities, Towns and Urban Areas ICOMOS 2011) Hence, there is a need for further studies to establish physical buffer zones.

Given that there are areas surrounding Sta. Catalina that have not been analyzed in terms of their historical significance, the assessment of Sta. Catalina St. can be a template for these places to follow. The physical buffer zone is a potential offshoot of this research. Once we have established the significance of the other areas apart from Sta. Catalina, then it is assumed that they could also enjoy the privileges and rights of such elevated status. The delineation of a buffer zone would then be a more complicated exercise. It is necessary therefore, to get the participation, cooperation, and commitment of the other communities i.e. the neighboring streets of Sta. Catalina, in order for a proper buffer zone to be described.

Creating awareness towards the formulation of a fully developed conservation plan has been the aim of the fieldwork. But as discussed in the first part of this paper, there is a need for extensive cultural mapping and documentation. The PAMANA group has come up with preliminary design interventions and recommendations for the local government based on four (4) days of field and documentation work. It was presented to the local barangay unit and was accepted with feedbacks and comments.

It is hoped that this report cooperation and the creation of a long-term plan in conserving Sta. Catalina's streetscape will become a benchmark for preserving heritage streets and landscapes. Conservation is a very tedious and long term process that needs attention, proper handling with great patience, proper research and acceptance that should start from the community level up to the local governing bodies, without further outsiders' intervention.

In most cultures in Asia it is necessary to involve the intangible aspect when dealing with the tangible object. Spirituality is highly observed and holistic approaches in studying heritage are practiced. When talking about the character of a place it includes the aspect of the place's culture. Aside from the heritage structures the people's intangible components. Traditions, practices, religion and cuisine in relation to these spaces make up the community's 'spirit of the place'. This is the main reason why proper cultural mapping has to be done prior to actual documentation to understand the project properly.

### References

- Interviewees from Carcar
  - August 10, 2012 Castro, Manny
  - August 11, 2012 Valencia, Petra Alfafara; Paraz, Galileo
  - August 12, 2012 Alfafara, Jerry Martin Noel
- Arnold, D. (2002). *Reading Architectural History*. London: Routledge.
- Arnold, D., & Ballantyne, A. (2004). *Architecture As Experience: Radical Change in Spatial Practice.* London and New York: Routledge.
- Douglass, M. (2002). "Economic Resilience, Livability and Urban Design: Towards Long Term Strategies for Port Cities". [Presentation]. Presented at the Urban Cooperation and Development Forum, Tianjin, China, 11-13 October.
- Fielden, B. M. (2003). *Conservation of Historic Buildings* (Third Edition ed.). Oxford: Architectural Press.
- Garnham, H.L. (1985). *Maintaining the Spirit of Place: A Process for the Preservation of Town Character*. Mesa, Arizona: PDA Publishers Corp.
- Hall, E. T. (1966). *The Hidden Dimension*. Garden City: Archor Books.
- Lico, G. R. (2008). *Arkitekturang Filipino: A History of Architecture and Urbanism in the Philippines*. Quezon City: University of the Philippines Press.
- Luciani, R. (2011). *Il Restauro: metodi e istrumenti di una* "eccellenza" Italiana tra arte, scienza y tecnologia. Roma, Italy: Palombi Editori.
- Middleton, D., & Brown, S. (2005). *The Social Psychology of Experience*. London: SAGE Publications Ltd.
- Nasution, K. S. (1997). Heritage Habitat: A Source Book of the Urban Conservation Movement in Asia and the Pacific. Penang, Malaysia: Asia & West Pacific Network for Urban Conservation.
- The Conservation of Cultural Property. (1968). Paris: UNESCO.
- Thompson, E. K. (Ed.). (1977). *Recycling Buildings: Renovations, Remodellings, Restorations and Reuse.* United States of America: McGraw-Hill Book Company.
- Thwaites, K. and Simkins, I. (2007). *Experiential Landscape:* an approach to people, place and space. London: Routledge.
- Zialcita, F. N., & Tinio, M. I. (1980). *Philippine Ancestral Houses*, 1810-1930. Quezon City: GCF Books.