

SEVILLA



**IDA: ADVANCED
DOCTORAL RESEARCH
IN ARCHITECTURE**

Antonio Tejedor Cabrera, Marta Molina Huelva (comp.)

IDA: Advanced Doctoral Research in Architecture
Sevilla: Universidad de Sevilla, 2017.

1.408 pp. 21 x 29,7 cm

ISBN: 978-84-16784-99-8

All right reserved. No part of this book may be reproduced stored in a retrieval system, or transmitted, in any form or any means without prior written permission from the Publisher.

EDITOR

Universidad de Sevilla

COMPILERS

Antonio Tejedor Cabrera

Marta Molina Huelva

DESIGN AND LAYOUT BY

Pablo Blázquez Jesús

María Carrascal Pérez

Daniel Longa García

Marina López Sánchez

Francisco Javier Navarro de Pablos

Gabriel Velasco Blanco

ADMINISTRATION AND SERVICES STAFF

Adoración Gavira Iglesias

Seville, november 2017

© 2017. IDA: ADVANCED DOCTORAL RESEARCH IN ARCHITECTURE

SEVILLA

IDE

ORGANIZED BY

iuacc
INSTITUTO UNIVERSITARIO
ARQUITECTURA Y CIENCIAS DE LA CONSTRUCCIÓN

 **uidus**
Escuela Internacional de Doctorado

arquitectura
Escuela Técnica Superior
Universidad de Sevilla

COLLABORATORS



Consejo Andaluz
de Colegios Oficiales
de Arquitectos



fundación **arquia**

All manuscripts have been submitted to blind peer review, all content in this publication has been strictly selected, the international scientific committee that participates in the selection of the works is of international character and of recognized prestige, an scrupulous method of content filtering has been followed in terms of its veracity, scientific definition and plot quality.

COMMITTEES

CONFERENCE CHAIRPERSONS

Antonio Tejedor Cabrera, *Coordinator of the PhD Program in Architecture and Director of the University Institute of Architecture and Construction Sciences, Professor Department of Architectural Design, University of Seville*

Marta Molina Huelva, *Secretary of the University Institute of Architecture and Construction Sciences, Professor of the Department of Building Structures and Geotechnical Engineering, University of Seville*

ORGANISING COMMITTEE

María Carrascal Pérez, *Department of History, Theory and Architectural Composition, University of Seville*

Mercedes Linares Gómez del Pulgar, *Department of Architectural Graphic Expression, University of Seville*

Ángel Martínez García-Posada, *Department of Architectural Design, University of Seville*

Pilar Mercader Moyano, *Department of Architectural Constructions I, University of Seville*

Domingo Sánchez Fuentes, *Department of Urban Planning and Spatial Planning, University of Seville*

Manuel Vázquez Boza, *Department of Building Structures and Land Engineering, University of Seville*

CONFERENCE SECRETARY

Pablo Blázquez Jesús, *Ph.D. student, Department of Architectural Design, University of Seville*

Marina López Sánchez, *Ph.D. student, Department of Architectural Design, University of Seville*

SCIENTIFIC COMMITTEE

José Aguiar-Universidade de Lisboa
Benno Albrecht-Università IUAV di Venezia
Francisco Javier Alejandro Sánchez-Universidad de Sevilla
Darío Álvarez Álvarez-Universidad de Valladolid
Antonio Ampliato Briones-Universidad de Sevilla
Joaquín Antuña-Universidad Politécnica de Madrid
Ángela Barrios Padura-Universidad de Sevilla
José María Cabeza Laínez-Universidad de Sevilla
Pilar Chías Navarro-Universidad de Alcalá
Juan Calatrava Escobar-Universidad de Granada
María Carrascal Pérez-Universidad de Sevilla
Helena Coch Roura-Universitat Politècnica de Catalunya
Jorge Cruz Pinto-Universidad de Lisboa
Carmen Díez Medina-Universidad de Zaragoza
Fernando Espuelas Cid-Universidad Europea
Alberto Ferlenga-Università IUAV di Venezia
Luz Fernández-Valderrama-Universidad de Sevilla
Vicente Flores Alés-Universidad de Sevilla
María del Carmen Galán Marín-Universidad de Sevilla
Jorge Filipe Ganhão da Cruz Pinto-Universidade de Lisboa
Carlos García Vázquez-Universidad de Sevilla
Sara Girón Borrero-Universidad de Sevilla
Francisco Gómez Díaz-Universidad de Sevilla
Amparo Graciani-Universidad de Sevilla
Francisco Granero Martín-Universidad de Sevilla
Francisco Hernández Olivares-Universidad P. de Madrid
Miguel Ángel de la Iglesia-Universidad de Valladolid
Paulo J.S. Cruz-Universidade do Minho
Francesc Sepulcre-Universitat Politècnica de Catalunya
Ángel Luis León Rodríguez-Universidad de Sevilla
Mercedes Linares Gómez del Pulgar-Universidad de Sevilla
María del Mar Loren Méndez-Universidad de Sevilla

Margarita de Luxán García de Diego-Universidad P. de Madrid
Madelyn Marrero-Universidad de Sevilla
Juan Jesús Martín del Río-Universidad de Sevilla
Luis Martínez-Santamaría-Universidad Politécnica de Madrid
Ángel Martínez García-Posada-Universidad de Sevilla
Mauro Marzo-Università IUAV di Venezia
Pilar Mercader Moyano-Universidad de Sevilla
Antonello Monaco-Università degli Studi di Reggio Calabria
Marta Molina Huelva-Universidad de Sevilla
José Morales Sánchez-Universidad de Sevilla
Eduardo Mosquera Adell-Universidad de Sevilla
María Teresa Muñoz Jiménez-Universidad Politécnica de Madrid
Jaime Navarro Casas-Universidad de Sevilla
José Joaquín Parra Bañón-Universidad de Sevilla
Víctor Pérez Escolano-Universidad de Sevilla
Francisco Pinto Puerto-Universidad de Sevilla
Mercedes Ponce Ortiz de Insagurbe-Universidad de Sevilla
Juan Luis de las Rivas Sanz-Universidad de Valladolid
Carmen Rodríguez Liñán-Universidad de Sevilla
Javier Ruiz Sánchez-Universidad Politécnica de Madrid
Joaquín Sabaté Bel-Universitat Politècnica de Catalunya
Victoriano Sáinz Gutiérrez-Universidad de Sevilla
Santiago Sánchez Beitia-Universidad del País Vasco
Domingo Sánchez Fuentes-Universidad de Sevilla
José Sánchez Sánchez-Universidad de Sevilla
Juan José Sendra Salas-Universidad de Sevilla
Julián Sobrino Simal-Universidad de Sevilla
Federico Soriano Peláez-Universidad Politécnica de Madrid
Rafael Suárez Medina-Universidad de Sevilla
Miguel Ángel Tabales Rodríguez-Universidad de Sevilla
Antonio Tejedor Cabrera-Universidad de Sevilla
Jorge Torres Cueco-Universidad Politécnica de Valencia
Elisa Valero Ramos-Universidad de Granada
Manuel Vázquez Boza-Universidad de Sevilla
Narciso Vázquez Carretero-Universidad de Sevilla
Teófilo Zamarreño García-Universidad de Sevilla

LT 3

PATRIMONIO Y
REHABILITACIÓN

HERITAGE AND REHABILITATION / PATRIMONIO Y REHABILITACIÓN

- p. 565-574: **NEW KNOWLEDGE ABOUT THE CHURCH OF SANTA MARÍA IN CARMONA** / p. 575-585: **NOVEDADES EN TORNO A LA IGLESIA DE SANTA MARÍA DE CARMONA**
Ojeda Barrera, Alfonso
- p. 587-596: **GEOMETRY AND CONSTRUCTION THROUGH THE SACRED SPACE OF ANDRÉS DE VANDELVIRA** / p. 597-607: **GEOMETRÍA Y CONSTRUCCIÓN A TRAVÉS DEL ESPACIO SACRO DE ANDRÉS DE VANDELVIRA**
Estepa Rubio, Antonio
- p. 609-619: **AN APPROACH TO THE IDEAL CONCEPT OF URBAN PLANNING IN THE 18TH CENTURY: COLONIAL SETTLEMENTS IN ANDALUSIA** / p. 620-630: **APROXIMACIÓN AL URBANISMO IDEAL EN EL S. XVIII: LAS NUEVAS POBLACIONES DE COLONIZACIÓN EN ANDALUCÍA**
Quevedo Rojas, Carlos
- p. 631-642: **POWER PLANT REUTILIZATION STRATEGIES ENEL POWER PLANTS AND PORT OF GENOA CASE-STUDY** / p. 643-655: **ESTRATEGIAS DE REÚSO DE LAS CENTRALES ELÉCTRICAS. LAS CENTRALES ENEL Y EL CASO ESTUDIO DEL PUERTO DE GÉNOVA**
Olivieri, Davide
- p. 657-664: **TECHNICAL-TECHNOLOGICAL AND MATERIALS COMPARATIVE ANALYSIS BETWEEN ITALIAN AND SPANISH MEDIEVAL SHIPYARD (THE CASE OF VENICE AND SEVILLE)** / p. 665-673: **ANÁLISIS COMPARATIVO TÉCNICO-TECNOLÓGICO Y DE MATERIALES ENTRE LOS ASTILLEROS MEDIEVALES ITALIANOS Y ESPAÑOLES (LOS CASOS DE VENECIA Y SEVILLA)**
Debenedictis, Domenico; Robador González, María Dolores; Pagliuca, Antonello
- p. 675-684: **STRATEGIES FOR CONSERVATION OF RELIGIOUS HERITAGE IN THE METROPOLITAN AREA OF LYON/SAINT-ÉTIENNE (FRANCE). SHORT RESEARCH STAY AND METHODOLOGICAL TRANSFER** / p. 685-695: **ESTRATEGIAS PARA LA CONSERVACIÓN DEL PATRIMONIO ECLESIAÍSTICO EN LA METRÓPOLIS LYON/SAINT-ÉTIENNE (FRANCIA). LA ESTANCIA BREVE INVESTIGADORA COMO VÍA DE TRANSFERENCIA METODOLÓGICA**
Mascort-Albea, Emilio J.; Meynier-Philip, Mélanie
- p. 697-709: **HYDRAULIC HERITAGE AND THE CONSTRUCTION OF THE TERRITORY: THE IRRIGATION COMMUNITIES** / p. 710-722: **EL PATRIMONIO HIDRÁULICO EN LA CONSTRUCCIÓN DEL TERRITORIO: LAS HEREDADES**
Delgado Quintana, Guacimara
- p. 723-731: **SUSTAINABILITY AND CONSERVATIVE REHABILITATION OF EXTREMADURAN PATRIMONIAL RURAL ARCHITECTURE AGAINST CLIMATE CHANGE. VEGAVIANA, CASE STUDY** / p. 732-741: **SOSTENIBILIDAD Y REHABILITACIÓN CONSERVADORA DE LA ARQUITECTURA RURAL PATRIMONIAL EXTREMEÑA CONTRA EL CAMBIO CLIMÁTICO. VEGAVIANA, CASO DE ESTUDIO**
Bote Alonso, Inmaculada
- p. 743-754: **TOWARDS A METHODOLOGY FOR THE ASSESSMENT OF VISUAL IMPACT CAUSED BY RENEWABLE ENERGY FACILITIES ON THE LANDSCAPE IN CULTURAL HERITAGE SITES** / p. 755-766: **HACIA UNA METODOLOGÍA DE VALORACIÓN DEL IMPACTO VISUAL CAUSADO POR INSTALACIONES DE ENERGÍA RENOVABLE EN EL PAISAJE EN EL ENTORNO DE LUGARES PATRIMONIO CULTURAL**
Diego Rodríguez, Jesús Carlos; Chías Navarro, Pilar
- p. 767-772: **THE URBAN RENOVATION IN PUEBLA, MEXICO. THE HISTORICAL CENTER AS EXPERIMENTAL SPACE. THIRTY YEARS OF CITY TRANSFORMATION** / p. 773-779: **LA RENOVACIÓN URBANA EN PUEBLA, MÉXICO. EL CENTRO HISTÓRICO COMO ESPACIO EXPERIMENTAL. TREINTA AÑOS DE TRANSFORMACIÓN DE LA CIUDAD**
Cortés Moreno, Jorge David
- p. 781-790: **THE ORNATE IN THE ARCHITECTURE OF TENERIFE AND GRAN CANARIA: 1865-1935** / p. 791-800: **EL ORNATO EN LA ARQUITECTURA DE TENERIFE Y GRAN CANARIA: 1865-1935**
Sabina González, José Antonio
- p. 801-807: **THE CONSERVATION OF THE CONSTRUCTIONS LOCATED ON PROTECTED NATURAL AREAS: RESEARCH EXPERIENCE IN DOÑANA** / p. 808-815: **LA CONSERVACIÓN DE LO CONSTRUIDO EN LOS ESPACIOS NATURALES PROTEGIDOS: EXPERIENCIA DE INVESTIGACIÓN EN DOÑANA**
Rincón Calderón, José María; Galán Marín, Carmen; Sanchez Fuentes, Domingo
- p. 817-827: **TRANSHUMANCE HERITAGE IN THE STRUCTURING OF THE LANDSCAPE, CITIES AND ARCHITECTURE** / p. 828-838: **EL PATRIMONIO DE LA TRASHUMANCIA EN LA VERTEBRACIÓN DEL TERRITORIO, LA CIUDAD Y LA ARQUITECTURA**
Gutiérrez Pérez, Nicolás
- p. 839-848: **INTERVENTION IN THE HERITAGE OF RURAL COLONIZATION ARCHITECTURE. THE VILLAGES OF LOS MONEGROS** / p. 849-859: **INTERVENCIÓN EN EL PATRIMONIO DE LA ARQUITECTURA RURAL DE COLONIZACIÓN. LOS POBLADOS DE LA COMARCA DE LOS MONEGROS**
Prieto Mochales, Luis
- p. 861-870: **MODERN ARCHITECTURE IN MANZANILLO, COLIMA, MEXICO 1930-1970 (TRANSFER AND ADAPTATION)** / p. 871-880: **ARQUITECTURA MODERNA EN MANZANILLO, COLIMA, MÉXICO 1930-1970 (TRANSFERENCIA Y ADAPTACIÓN)**
Yáñez Ventura, Marco Antonio; López García, J. Jesús
- p. 881-893: **FIRST INTERNATIONAL ARCHITECTURAL JOURNEY OF JUAN MADRAZO** / p. 894-906: **PRIMER VIAJE INTERNACIONAL ARQUITECTÓNICO DE JUAN MADRAZO**
Fernández Martínez, Margarita María
- p. 907-918: **HOUSES, COURTYARD TENEMENT HOUSING, INNS AND SHOPS IN 16TH SEVILLE. ARCHITECTURE, DRAWING AND GLOSSARY OF MASTER BUILDERS** / p. 919-930: **CASAS, CORRALES, MESONES Y TIENDAS EN LA SEVILLA DEL SIGLO XVI. ARQUITECTURA, DIBUJO Y LÉXICO DE ALARIFES**
Núñez González, María
- p. 931-939: **TOWARDS THE CONSTRUCTION OF ATLAS OF SURVIVING ARCHITECTURES** / p. 940-949: **HACIA LA CONSTRUCCIÓN DEL ATLAS DE ARQUITECTURAS SUPERVIVIENTES**
Tejera Mujica, Noemi
- p. 951-960: **TRANSFORMATIONS OF THE ALCÁZAR OF SEVILLE THROUGH ITS IMAGES (1902-1969)** / p. 961-971: **TRANSFORMACIONES DEL REAL ALCÁZAR DE SEVILLA A TRAVES DE SUS IMÁGENES (1902-1969)**
Bañasco Sánchez, Pablo
- p. 973-980: **THE ARCHITECTURE OF POWER. THE ISLAND INSTITUTIONS AND AUTONOMOUS BODIES. ANALYSIS OF THE CASES: GRAN CAÑARIA, TENERIFE AND MADEIRA** / p. 981-987: **LA ARQUITECTURA DEL PODER. LAS INSTITUCIONES INSULARES Y ORGANISMOS AUTÓNOMOS. ANÁLISIS DE LOS CASOS: GRAN CANARIA, TENERIFE Y MADEIRA**
Hernández Cruz, Ricardo Kevin
- p. 989-998: **PROPOSAL FOR AN INDICATORS SYSTEM OF URBAN INTEGRATION OF THE MARITIME PORTS HERITAGE** / p. 999-1009: **PROPUESTA PARA UN SISTEMA DE INDICADORES DE INTEGRACIÓN URBANA DEL PATRIMONIO PORTUARIO MARÍTIMO**
De las Peñas García, Jesús
- p. 1011-1020: **EMPIRICAL METHOD APPLIED IN RESEARCH ON RESIDENTIAL ENERGY RETROFITTING** / p. 1021-1031: **MÉTODO EXPERIMENTAL EN LA INVESTIGACIÓN SOBRE REHABILITACIÓN ENERGÉTICA RESIDENCIAL**
Escandón, Rocío; Blázquez, Teresa; Martínez-Hervás, Mónica; Suárez, Rafael; Sendra, Juan José
- p. 1033-1042: **AESTHETICS OF RUINS AND ETHICS OF ARCHITECTURAL DESIGN: NEW INTERVENTIONS ON ARCHAEOLOGICAL HERITAGE** / p. 1043-1053: **ESTÉTICA DE LAS RUINAS Y ÉTICA DEL PROYECTO ARQUITECTÓNICO: NUEVAS INTERVENCIONES EN EL PATRIMONIO ARQUEOLÓGICO**
Bagnato, Vincenzo Paolo

MODERN ARCHITECTURE IN MANZANILLO, COLIMA, MEXICO 1930-1970 (TRANSFER AND ADAPTATION)

Yáñez Ventura Marco Antonio, López García J. Jesús

Universidad Autónoma de Aguascalientes, colimootes@yahoo.com.mx
Universidad Autónoma de Aguascalientes, jjlopezg@correo.uaa.mx

Summary: The language of Modern Architecture in Latin America is the result of a process of transfer and adaptation of ideas, generated by the great European masters such as Mies, Gropius and Le Corbusier, due to the particular characteristics of each context they had to adapt to geographic, climatic and social conditions, this regionalization of architecture was the same in Argentina, Chile, Brazil and, of course, Mexico, in turn, allowed to be a catalyst in the transition towards the modernity of cities. In the modern architecture of Manzanillo some of the projects and works carried out in 1930 - 1970, this process becomes evident, which will become a part waters in the modernity of the city.

Architectural compositions of the national program projects of which Manzanillo was included (schools, hospitals and tourist infrastructure) by foreign architects, print media (construction manuals, magazines, newspapers, brochures, postcards, etc.) and constant migratory flows of professionals who arrived at the port due to the commercial boom facilitated the transfer of the concepts of Modern Architecture.

Keywords: Architecture, Modern, Transfer, Adaptation.

1. Introduction

I present in this document the advances made up to the 4th semester of my doctoral thesis, where the analysis of information is the main point of the research process, whose objective is to be able to propose specific guidelines for the presentation of results in the final semesters, as well as the tools used for the analysis, collection and classification of the information collected for this project, which shows that there is an adaptation of the Modern architecture, which arrived using various means resulting in the traditional architecture and all its elements transform and give rise to the modernity of the city.

This research project seeks to contextualize the Modern Architecture of the city as a result of a process of transferring ideas, spatial schemes, architectural programs, new materials, etc., which starting from most of a central geographical point of reference as was the Mexico City, is diluted by the interior of the country using various mechanisms for its diffusion, with the attenuating that will have to adapt to the particular conditions of each context, will appear in the national scenario new architectural typologies that through a regionalization as a whole will what has been defined as other modernities, which will be located in the interior of the country, which do not exclude the main ideas of the great international or national masters, nor are they far from the principles of CIAM, rather they become a new manifestation of this architecture.

Given that Modern Architecture in Latin America had a suitable setting for its diffusion, its great cities in the twentieth century were the majority in processes of transition to modernity, some had the devastating effects of the social revolutions of the time, so that immediate reconstruction measures were necessary, enabling them to be the main catalysts in the construction of a new social fabric, appearing new ways of building, new materials, new ways of inhabiting and conceiving spaces.

The urban transformations were based on the hygienist principles of the time and on manifesting the International style, emphasizing the typologies that reflect that incipient Modernity through architecture, which would have to adapt according to the particular contexts of each region, such as: Climate, materials, technology, culture, geographical location, etc., Manzanillo will be of those cities that will have a process of transformation according to the needs of their time, where the traditional architecture and its elements will have to adapt to a new changing society and industrialized, where the rapid intervention of experts is required to adapt the functional and typological conditions of the city in the new challenges of the twentieth century. Capilla (2010) tells us, "But it has never been in the goals of architecture that the replacement of customs or the uprooting of traditional issues of a city, or even the elimination of its most popular aspects. In normal conditions, architecture has attempted to be a logical consequence of its time, an instrument that in some measure wants to measure the degree of modernity and commitment of a".

2. Problem approach

2.1. General hypothesis

Some of the projects carried out by the private initiative and those proposed by the national plans of education and health between 1930 and 1970 in the city of Manzanillo are the result of a process of transfer and adaptation of the space compositions of Modern Architecture.

2.2. General inquiry question

How were the concepts of Modern Architecture interpreted in some of the projects and works in the city of Manzanillo between the years of 1930 and 1970?

2.3. General objectives

Identify the architectural projects and works carried out in Manzanillo between 1930 and 1970, institutional or private, in which according to their architectural composition a process of transfer and adaptation of the characteristics of Modern Architecture (Free Plant, lack of ornamentation, composition modular, building materials and systems, etc.).

2.4. Particular hypotheses

Architectural compositions of the national program projects of which Manzanillo was included (schools, hospitals and tourist infrastructure) by foreign architects, print media (construction manuals, magazines, newspapers, brochures, postcards, etc.) and constant migratory flows of professionals who arrived at the port due to the commercial boom, facilitated the transfer of the concepts of Modern Architecture.

The particular characteristics of the context such as climatic conditions, geographical location, unskilled labor, quality of materials, was an important variable in the process of adapting the concepts of Modern Architecture in the spatial composition of works and projects in Manzanillo between 1930 and 1970.

The typology of the Architecture of Manzanillo between 1930 and 1970 brings new elements resulting from the conditions of the context to the Modern Architecture realized in Mexico.

2.5. Private Investigation Questions

What were the mechanisms that allowed the transfer of the concepts of Modern Architecture in the projects and works carried out between 1930 and 1970 in the city of Manzanillo?

What were the main determinants for adapting the space compositions and concepts of Modern Architecture in the local architectural production of the years 1930 - 1970?

What was the contribution of the architectural production of Manzanillo made between the years 1930 and 1970 to the concepts of Modern Architecture in Mexico?

2.6. Particular objectives

Indicate the means used in the process of transferring the concepts of Modern Architecture in the projects and works carried out between the years 1930 - 1970 in the city of Manzanillo.

To present the result of the process of adaptation of the ideas of the Modern Architecture in the architectural composition of the works and projects. To expose the elements and spatial schemes that were the result of the process of transfer and adaptation of the concepts of Modern Architecture in the projects and works of Manzanillo between 1930 and 1970.

3. Sources consulted

Maya (2014) tells us that "The main sources of scientific work are books, reference works, encyclopedias and dictionaries, indexes and abstracts, periodicals and information banks." In the process of this documentary research for this theoretical - historical project, data have been collected from various primary and secondary information sources in which the selection, classification of data and their references according to the needs and scope of the subject, the resources most used in this process are: books, magazines, newspapers, plans, etc.; found in libraries, newspaper libraries, photo libraries, documentation centers and private collections, which contain information that must be selected and analyzed, using data collection instruments designed according to the scope and characteristics of the project that facilitate the registration and classification of data.

During the data collection process, the main libraries of the country (Mexico) of some universities have been visited, such as the central library of the UNAM, Lino Pikaseño library and Luis Unikel of the university's faculty of architecture, Instituto Tecnológico de (ITESO), library of the faculty of architecture of the University of Colima, library Mexico, Lerdo de Tejada, José Vasconcelos. Institutional documentation centers such as the general archives of the nation, historical archives of Colima, the municipal archives of Manzanillo, the documentation center of the Secretary of Health, the IMSS's historical archive, the INAH's photo library, the national newspaper archive, the archives of Mexican architects UNAM, newspaper library of the University of Colima and some particular photographic collections.

4. Design of information collection instruments

In this process, specialized bibliographies, agreements, councils, edicts, architectural magazines specialized in Modern Architecture such as Calli, Spaces, Architecture Mexico, Cement, planes, sketches, postcards of the time, theses, reports, etc., there have been some interviews with chroniclers, specialists in the field, historians, owners, etc.

The tools proposed for the study phenomenon of our research project will allow us to better manage and classify the information collected in the various sources that have been used in the data collection process. Due to the great diversity of documents that have been consulted and according to their characteristics, it is not possible to homogenize a single criterion for the design of a template, otherwise this data should be classified and separated by tools that allow a better analysis, classification and order of the information with elements that are according to the characteristic of the type of source consulted.

5. Analysis of information

In the research stage the purpose of the analysis of the data collected Hernández (2009) states that

"it serves to estimate parameters and test hypotheses" and Gómez (2005) states that "this exercise will segregate information or eliminate the least important, to ensure the presentation of the most relevant information. However, once the essential points of the information have been identified, it is necessary and pertinent to analyze them in more detail, and thus to make value judgments that have greater depth "

During the process of historiographical analysis of the theme: Modern Architecture in Manzanillo, Colima, (transfer - adaptation), some tools have been proposed previously to order, classify and analyze a series of data collected in different types of sources such as public collections, private collections, newspapers, magazines, photographs, postcards, books, advertising brochures, etc. The information obtained has been selected and valued to be able to carry out in detail an inventory of projects and works.

The validation of these data and dates made it possible to define a temporality to carry out a more objective analysis of the elements of study, taking as reference the obtained data, a period between the years 1930 to 1970, to explain the process of transference of the ideas, theories, principles, spatial schemes and characteristic elements of Modern Architecture and their adaptation according to the context in the local architectural production.

It is important to point out that the main objective of this research project is not to elaborate a catalog of Modern Architecture in Manzanillo, but to take as reference the existing tangible elements corresponding to that period for the verification of the hypotheses. Noelle (2005) tells us *"The works built on what we can call" the last century "have been faced by the contempt of those who seek to preserve that legacy that is not covered by the brilliance of history; they have not only fallen prey to neglect and destruction, but in some cases they have been denied the right to insert themselves into historical urban fabric, unlike the creations of earlier centuries "*

It was of vital importance in this research project, the processing of the data, implying a detailed analysis of each information collected, classifying it according to the nature and relevance of the same, becoming a reference to solve the problem, verify the hypotheses, and to have the necessary elements to prepare the final report.

The result of this analysis is concentrated in final formats that explain in detail the selected elements, as well as complementary references (notes, sketches, newspaper articles, magazines, photography, etc.) that allow us to validate the authenticity of the information.

As a starting point was the filling of the cedula containing an inventory of the modern architecture of the city classified according to its gender, with the aim of being able to determine objects of study that could offer us precise data about each of them, proposing the the following variables for their individual identification, Name of the building, Builder or designer, location, dating, current status and personalized key for quick identification, it is worth mentioning that some existing buildings were not included due to the lack of access to the information or not they had the disposition on the part of the owners. (See Table 1). Continuing with a photographic registration card identifying the property, which allowed us to know its current status, location, dating and supplementary data and then make a final classification based on information obtained from the various sources consulted.

A mapping map is proposed where the object of study is contextualized in a general way by means of a map of the city that indicates the location of the selected buildings, which allowed us to define our area of study. Continuing with an individual analysis card that is complemented with references found in the various sources consulted, which aims to identify characteristic features of Modern Architecture in the selected buildings.

The results obtained show several temporalities and characteristics, which appeared in the urban context, although in some cases the selection was limited to real estate where the availability of information was available, allowed us to obtain a considerable sample of elements which correspond to the time interval in the proposed study spectrum, these being the main tangible evidence where the main hypothesis of our research project can be demonstrated, the process of transfer - adaptation of Modern Architecture ideas and how the resulting typology was inserting into existing tissue and the way it relates to the national context.

Chart 1. Document for Modern Architecture's inventory according to gender.

PROGRAMA INTERINSTITUCIONAL DE DOCTORADO EN ARQUITECTURA PIDA							
CEDULA PARA INVENTARIO DE ARQUITECTURA MODERNA SEGÚN SU GENERO							
N°	GENERO ARQUITECTONICO	NOMBRE DEL INMUEBLE	PROYECTO, ARQUITECTONICO Y/O CONSTRUCTOR	UBICACIÓN	DATACION	ESTADO ACTUAL	
I. SALUD						CLAVE	
1	salud	Hospital Civil de Manzanillo	Arq. Luis Garcia Remus	Col. San Pedro s/n Unidad habitacional Padre Hidalgo	1940	Bueno	HOSP01
2	salud	Servicios de seguridad social del IMSS " Padre Hidalgo"	Arq. Alejandro Prieto - Arq. José María Gutiérrez		1960	Bueno	HOSP02
II. EDUCACION							
1	Educación	Escuela Primaria Vicente Guerrero	Arq. Carlos Leduc	Calle Aldama N° 23	1943	Bueno	EDU01
2	Educación	Escuela primaria Benito Juárez	Arq. Carlos Leduc	Av. Juárez s/n	1935	Demolido	EDU02
III. TURISMO							
1	Turismo	Hotel playa de Santiago	Arq. García Ramos	calle península de Santiago N° 12	1944	Bueno	TUR01
2	Turismo	Hotel Colonial		Av. Mexico	1942	Bueno	TUR02
3	Turismo	Foreiq Club. (la casa del marino.)	Cap. Rolando Cordera	Calle Juárez	1944	Bueno	TUR03
4	Turismo	Hotel Miramar	No existe una fuente fidedigna	Calle Juárez		Bueno	TUR04
IV. URBANIZACION HABITACIONAL							
1	Urbanizacion - habitacional	Fraccionamiento Playa azul (Colonia las Brisas)	Urbanizadora de Manzanillo	Colonia las brisas	1945	Bueno	URHB01
2	Urbanizacion - habitacional	Fraccionamiento Peninsula de Santiago	Fraccionadora Peninsula de Santiago	Peninsula de Snatiago	1951	Bueno	URHB02
3	Urbanizacion - habitacional	Unidad habitacional Padre Hidalgo	Arq. Alejandro Prieto - Arq. José María Gutiérrez	Manzanillo Centro	1960	Bueno	URHB03
4	Urbanizacion - habitacional	Unidad habitacional INFONAVIT	INFONAVIT	Fracionamiento playa azul	1973	Bueno	URHB04
5	Urbanizacion - habitacional	Unidad habitacional Fovisste	FOVISSTE	Fracionamiento playa azul	1974	Bueno	URHB05
V. RELIGION							
1	Religion	Iglesia de Guadalupe	Desconocido	Manzanillo Centro	1940	Bueno	RG.01
VI. HABITACIONAL							
1	Habitacional	Edificio Sanchez	Ing. Jose Sanchez Diaz	Manzanillo Centro	1945	Bueno	HAB01
2	Habitacional	Edificio Machetto 1.	Arq. Fernando Parra	Manzanillo Centro	1949	Bueno	HAB02
3	Habitacional	Edificio Machetto 2.	Arq. Fernando Parra	Manzanillo Centro	1949	Bueno	HAB03
4	Habitacional	Edificio Campos	Desconocido	Manzanillo Centro	*1950	Bueno	HAB04
5	Habitacional	Edificio Chantilly	Arq. Fernando Parra	Manzanillo Centro	1950	Bueno	HAB05
7	Habitacional	Edificio Cordera	Cap. Rolando Cordera	Manzanillo Centro	1952	BUENO	HAB07
VII. EDIFICIOS DE GOBIERNO							
1	Edificios de Gobierno	Presidencia Municipal	Junta local de mejoras	Manzanillo Centro		Bueno	GOBO1
2	Edificios de Gobierno	Proyecto de Palacion Municipal	Arq. Salvador Aiduncin Serrati	Manzanillo Centro	1966	Proyecto	GOB02

Chart 2. Mapping's document of Manzanillo's Modern Architecture.

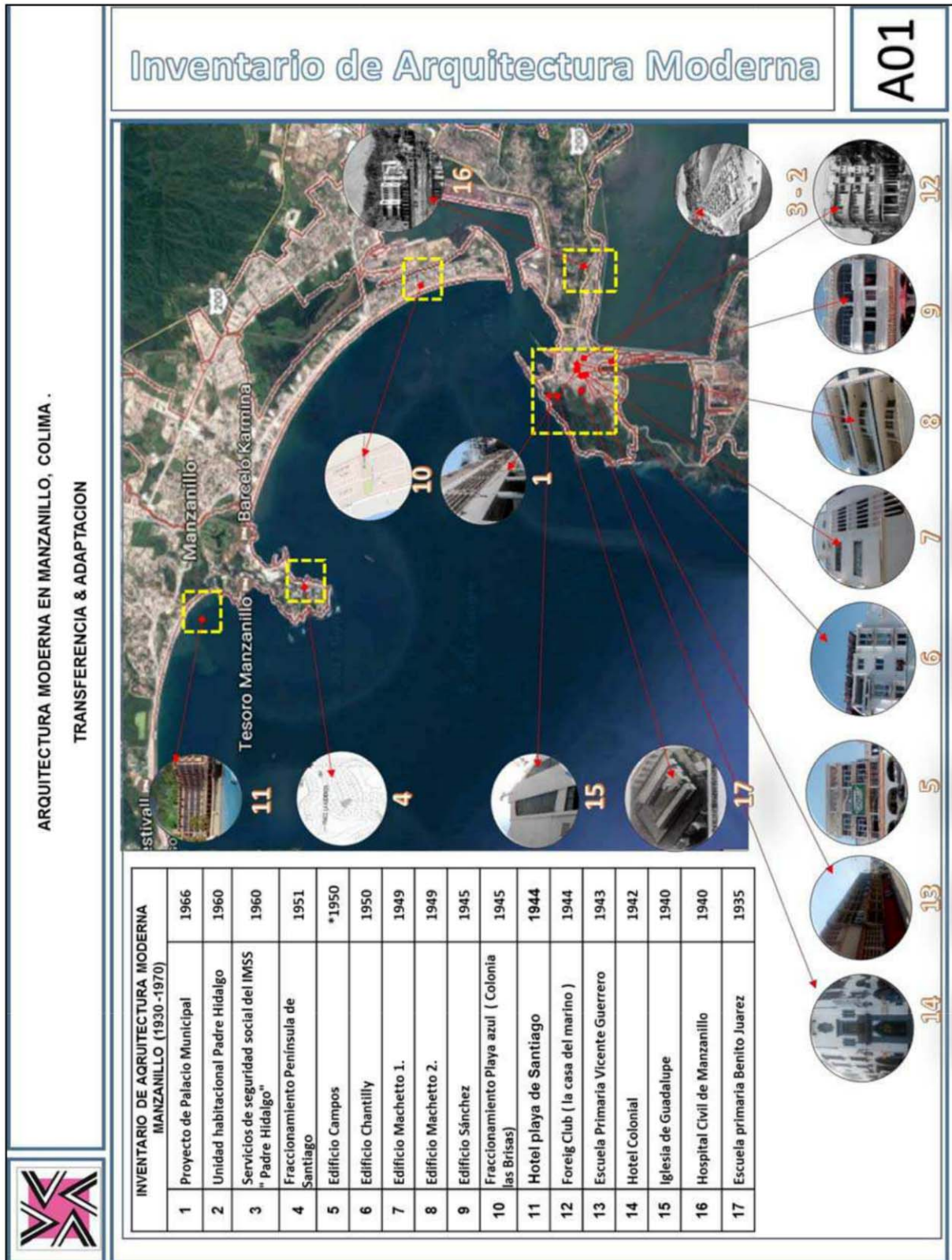



Chart 3. Individual document analysis.




ARQUITECTURA MODERNA EN MANZANILLO, COLIMA .

TRANSFERENCIA & ADAPTACION

Inventario de Arquitectura Moderna


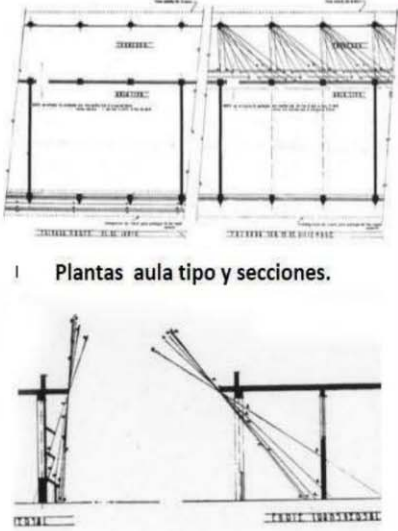
ESCUELA PRIM. VICENTE GUERRERO



Resumen:

Debido a que el estado de Colima en la década de los 40 , es considerados dentro de los programas nacionales de reconstrucción de escuelas por el recién creado CAPFCE , donde la memoria de planeación de escuelas en este caso para colima hace las siguientes recomendaciones, "dada las condiciones climatológicas del estado de Colima, los sistemas constructivos se han simplificado, hasta donde el clima y la constitución geòlica del lugar lo han permitido, ha sido nombrado el Arq. Carlos Leduc encargado de los proyectos del Estado

Planos, croquis e imágenes:

Planta aula tipo y secciones.
El programa mínimo que se formuló para los edificios escolares del Estado de Colima, fue el siguiente:
 1 local para el gobierno de la Escuela (Directivo y Secretarías).
 1 local pequeño para distribución de energía y atención de las brigadas sanitarias que realizan el plan de salud.
 1 local de 30 x 4 metros, como oficina, para taller de carpintería.
 1 local de 7 x 4 metros, como mínimo, para laboratorio experimental de Física-Química.

CEDULA DE IDENTIFICACIÓN			
GENERO :	Educación	AUTOR:	Arq. Carlos Leduc
		AÑO:	1943
USO ACTUAL:	Escuela Primaria	ESTADO DE CONSERVACION :	Buena (Modificado)
			EDU 01
			CLAVE

Chart 4. Individual document analysis.



ARQUITECTURA MODERNA EN MANZANILLO, COLIMA .

TRANSFERENCIA & ADAPTACION

Inventario de Arquitectura Moderna

ESCUELA PRIM. VICENTE GUERRERO

Referencias de apoyo (bibliografía , artículos de periódicos , mapas y estadísticas) :



Programa minimo para los edificios escolares

El programa mínimo que se formuló para los edificios escolares del Estado de Colima, fué el siguiente:

- 1 local para el gobierno de la Escuela (Dirección y Secretaría).
- 1 local pequeño para curaciones de emergencia y atención de las brigadas sanitarias que visitan el plantel escolar.
- 1 local de 9 × 6 metros, como mínimo, para taller de carpintería.
- 1 local de 9 × 6 metros, como mínimo, para laboratorio experimental de Física-Química.



Zona 3a.

Numero	MUNICIPIO	Nombre del Ayuntamiento	Población Total	Población Escolar	Escuelas	Escuelas de Primaria	Escuelas de Secundaria	Escuelas de Preparatoria	Escuelas de Normal	Escuelas de Especialidad	Escuelas de Otros	Escuelas que requieren reparación
1	Manzanillo	Manzanillo	6,871	1,297	134	103	413	779	10			
2	Armería	Armería	1,430	276	110	22	66	180	2			X
3	Comonfort	Comonfort	310	80	24	5	19	30	1			
4	Colón	Colón	301	119	47	6	14	71	1			
5	El Coloso	El Coloso	417	79	21	6	23	47	1			
6	Cerro de las Salinas	Cerro de las Salinas	2,169	411	104	31	191	245	0			
7	Jalisco	Jalisco	240	40	19	2	13	20	1			
8	Puerto de Ahuacanes	Puerto de Ahuacanes	444	94	15	0	12	24	1			X
9	P. del Agua de C.	P. del Agua de C.	545	43	22	0	27	51	1			X
10	Puerto de Ahuacanes	Puerto de Ahuacanes	286	39	18	2	15	20	1			
11	Salamanca	Salamanca	230	45	18	3	13	27	1			
12	San Pedro	San Pedro	194	27	14	2	12	23	1			
13	Santiago	Santiago	520	95	39	7	32	40	1			
14	Trochile	Trochile	195	22	14	2	12	24	1			




CEDULA DE IDENTIFICACIÓN

GENERO :	Educación	AUTOR:	Arq. Carlos Leduc	AÑO:	1943	EDU 01
USO ACTUAL:	Escuela Primaria	ESTADO DE CONSERVACION :	Bueno (Modificado)			CLAVE

IDA: Advanced Doctoral Research in Architecture

868

6. Preliminary conclusions

According to the scope proposed for this semester in the general schedule of the research project we can conclude that in the Modern Architecture of Manzanillo taking as a reference the analysis of the selected buildings shows an adaptive transformation of techniques, design processes and comfort that come from outside, some means were identified that facilitated the transfer of ideas such as, for example, the national or professional construction projects abroad, to a new environment to which they will have to be adapted to the particular conditions of the city context, this process was not sui generis, in the national context there was something similar as mentioned by Guillen (2009) "The debate between the internationalist architects who wanted to follow the purest modernism and the nationalists who craved modern architecture adapted to the Mexican realities and their surroundings" ;

In this case in particular the climatic conditions set the tone for the adaptation of the spatial schemes of the architectural projects developed, always seeking to satisfy the needs of interior comfort for the users. We find some architects who stand out in the national medium like Architect Carlos Leduc, who will be considered in the end as one of the most influential in Mexican Architecture, Architect Fernando Parra Hernández who will develop important projects that will have impact in the process of transition to the modernity of the country, the architect Alejandro Prieto who will be one of the promoters and builders of social security complexes of the Mexican Social Security Institute in the 50's and others who came from different latitudes to do or collaborate in projects of great relevance for the city.

It is important to point out the valuable contribution of local entrepreneurs as was the case of Mr. Octavio Maccheto of Italian origin who became one of the most important promoters of Modern Architecture in the city and in the region with the construction of buildings that arrived to be considered the most modern, two will be within the housing genre and one in the tourist, during the construction process will be used the most innovative techniques, materials and procedures of the time, and in some cases the materials will be brought from other regions with the objective that meet their quality standards, these buildings will be projected by foreign architects who arrive in Manzanillo to carry out previous studies of place to be able to propose space solutions according to their characteristic, giving as a result elements and typologies of regional character that are not excluded with the modern architectural language of the national context.

The Modern Architecture of Manzanillo is not an isolated case, it is a phenomenon that is going to present in any part of the world, the ideas the great masters like Mies, Le Corbusier, Gropius and those generated in the CIAM, were not compatible in all the in Latin America, in Mexico we have very different characteristics in each region, it was a process that was manifesting itself in a very constant way, where the builder, designer or promoter had to propose projects that satisfying the needs of the user, resulting in Ettinger (2013) "Other modernities".

7. Acknowledgments

To my thesis tutor, Dr. J. Jesús López García, for his unconditional support and for being an excellent guide in the process of my doctoral thesis, Dr., Julián Sobrino Simal, for all his councils and contributions to my project of research, especially for their friendship.

This article is dedicated:

In memory of my father. Marco Antonio Yáñez Cortes. To God, by His grace and love.

To my Mother for giving me life.

To my wife Ivonne with all my love, my help is suitable.

To my son Marquito, for being my light that lumina my way. To my sister Olympia.

To Jorge and Ivan for all their support

8. Bibliography

Capilla, Ignacio. *Arquitectura del racionalismo en Sevilla*. España: FIDAS, 2006.

Ettinger, Catherine, Jesús, López y Luis, Mendoza, *Otras modernidades. Arquitectura en el interior de México 1920 – 1960*, México, Porrúa, 2013.

Gómez Bastar, Sergio. *Metodología de la Investigación*. México: Red tercer milenio, 2012.

Guillen, Mauro. *La disciplinada belleza de lo mecánico el taylorismo y el nacimiento de la Arquitectura Modernista*. España: Modus Laborandi. 2009.

Hernández Sampieri, Roberto. *Metodología de la investigación*. 4ª. Ed. México: Mc. Graw Hill, 2006.

Maya, Esther, *Métodos y técnicas de investigación*, México, UNAM – Facultad de arquitectura, 2014.

Noelle, Louise; (2005). Reseña de "Arquitectura del siglo XX en el centro histórico de la ciudad de México" de Rodolfo Santa María. *Anales del Instituto de Investigaciones Estéticas*, XXVII otoño.