



**SAMBORONDON CANTON
ECUADOR**

**GROWTH MANAGEMENT
PLAN**

**MUNICIPALIDAD DEL CANTON DE
SAMBORONDON**

**UNIVERSIDAD DE
ESPECIALIDADES ESPIRITU
SANTO**

**GEORGIA INSTITUTE OF
TECHNOLOGY**



Preface

The Canton of Samborondon, over the past nine months, has undertaken a planning process to determine the course of growth over the next 25 - 35 years in this rapidly growing Canton adjacent to Ecuador's largest city, Guayaquil. With growth in the Canton expected to triple in this period (from about 60,000 to 180,000 persons), and with significant changes occurring in land and construction costs, demographics and the broadening market for new development, the already high stress on existing Canton infrastructure and services, and on the rich rice growing areas of the Canton and the traditional culture it supports, will become even more critical. Wishing to create a plan for orderly growth and provision of services with the participation of landowners, citizens and public officials, the Canton has produced this strategic framework for growth that can be used to guide land use policies, capital investments, and development ordinances.

This plan was prepared with the assistance of The Georgia Tech College of Architecture in Atlanta, Georgia, USA, and the School of Architecture at the Universidad Especialidades Espiritu Santo (UEES), in Samborondon. In the fall of 2003 faculty and students from the UEES collected, mapped and analyzed relevant data with the assistance of both landowners and Canton officials. This work is presented in a separate document, and is available in the canton City Hall. During the spring of 2004 a series of planning workshops with Canton officials and stakeholders were held to facilitate a consensus on the main elements of the plan and the means to implement it. This also included a weeklong series of intensive sessions with planning and architecture students from Georgia Tech and UEES to help formulate and visualize the impact of growth in the Canton.

It is our hope that the recommended policies contained in the plan will be adopted by the Canton and become the guide for future growth in the Canton to the benefit of its land and its people.

Mayor Coco
With

Ana Maria Leon, Project Director, UEES
Randal Roark, Project Director, Georgia Tech



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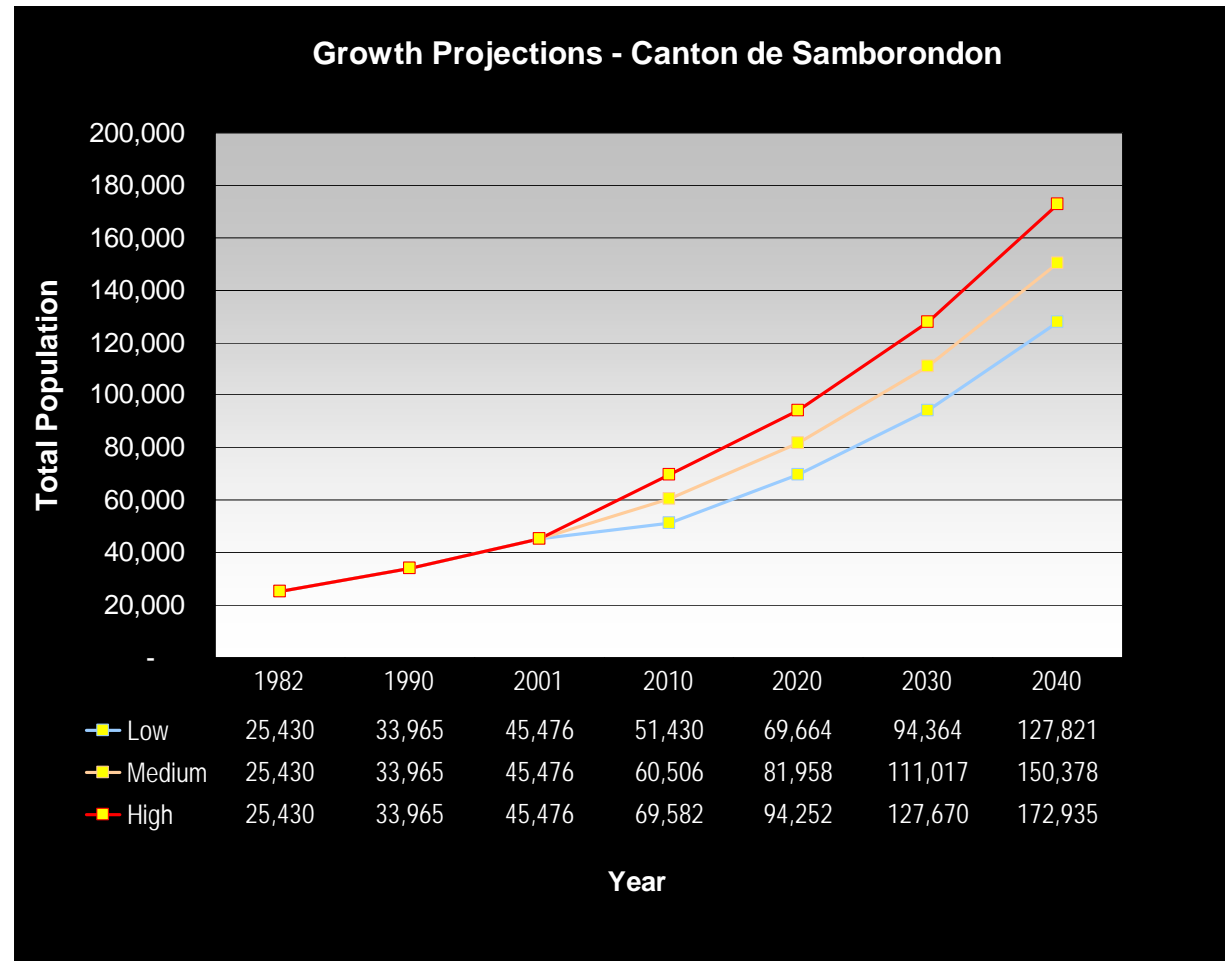
Samborondon Canton Growth Framework

7 Goals For Future Growth

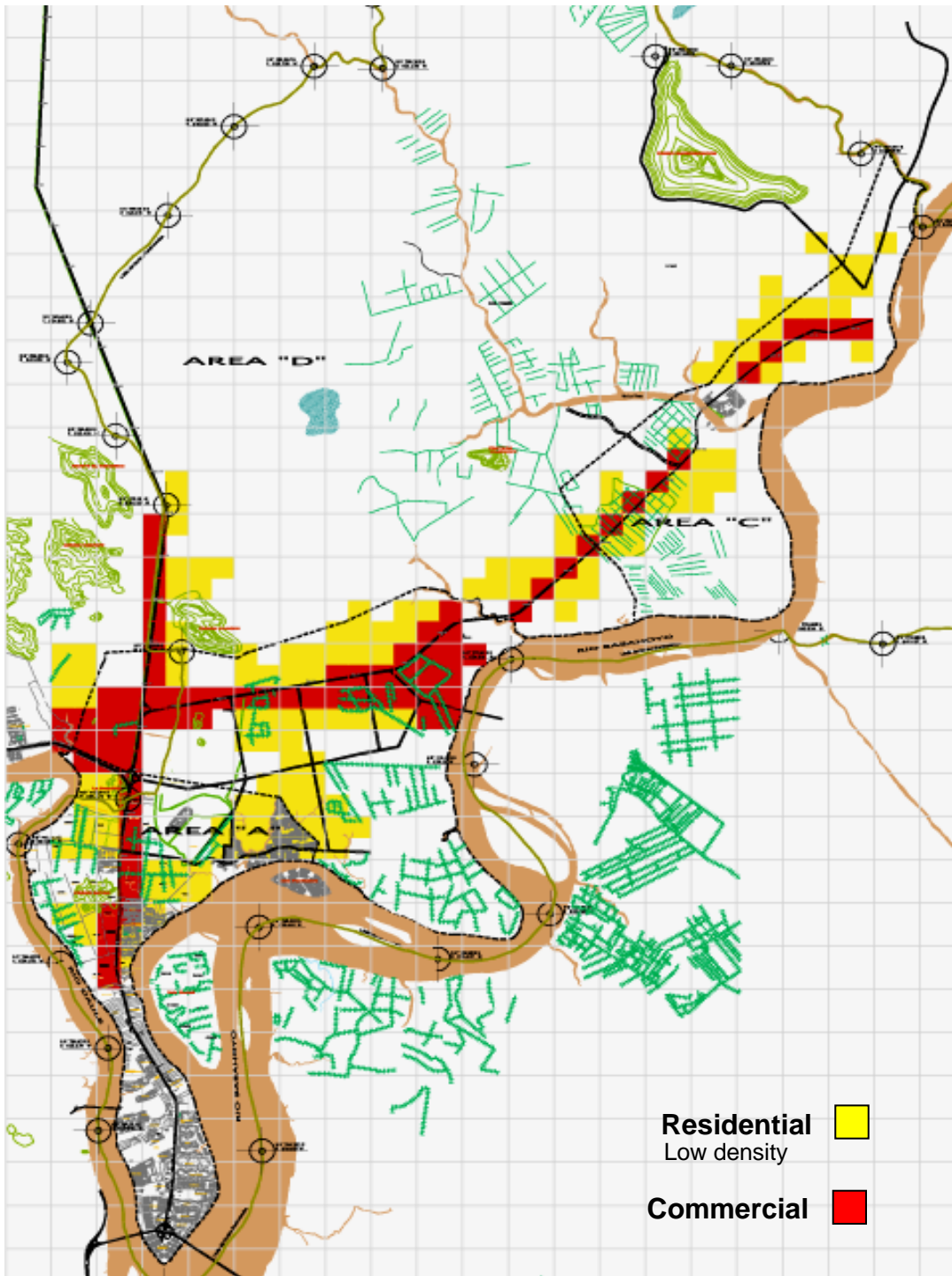
1. Create a framework for growth that can support a diverse population of 150,000 to 200,000 persons that can adapt to changing market and demographic conditions over the next 20 – 25 years.
2. Provide a structure for this growth in a series of new and existing communities, each of which can support a broad range of housing types centered on a mixed-use core of adequate commercial and civic uses and community services.
3. Within the plan develop a job base to reduce dependence on Guayaquil, reduce transportation times and costs and increase property tax revenues. Include in the job base development at least:
 - A light industry zone associated with the regional perimeter highway and alternate bridge.
 - Touristic development associated with natural and scenic resources such as the hills and rivers
4. Plan and construct a diverse transportation system that reduces dependence on the automobile and single highway corridors by:
 - Creating a secondary grid of secondary roads devoted primarily to local traffic
 - Providing opportunities for alternative modes of transportation, including both pedestrian facilities and bus and water transit
 - Create a "Parkway" along the river to:
 - Provide an alternate local through route
 - Attract new development
 - Control flooding and protect the river's edge
5. Provide for comprehensive and efficient infrastructure systems that maximize connections to existing systems and minimize unnecessary costs of new systems and to provide a rational structure for attracting and configuring new growth.
6. Protect and reinforce the agriculture base of the Canton as a fundamental economic and cultural resource.
7. Minimize the adverse impact of new development on the Canton's natural environmental resources, including rivers, estuaries, and hills, and protect there resources as pupils open space reserves where possible.



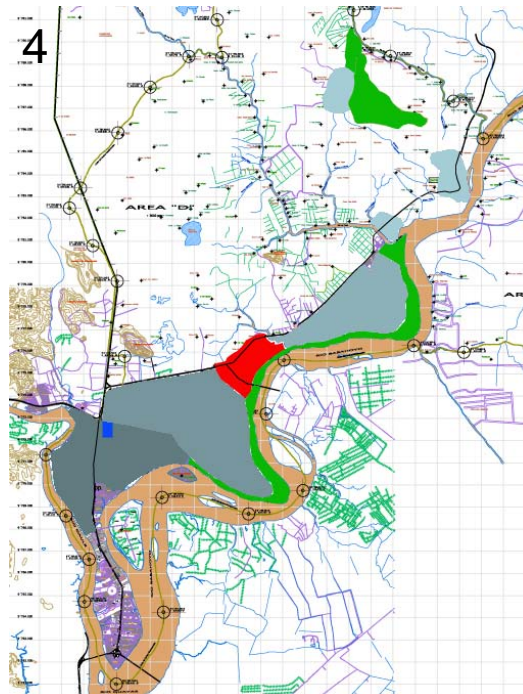
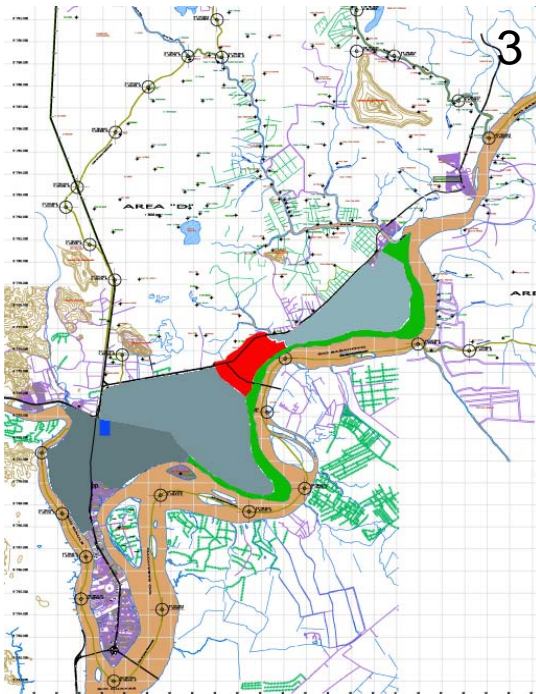
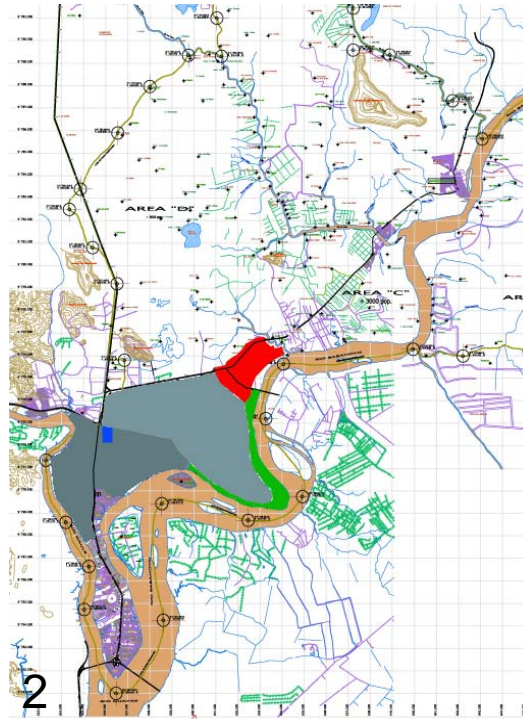
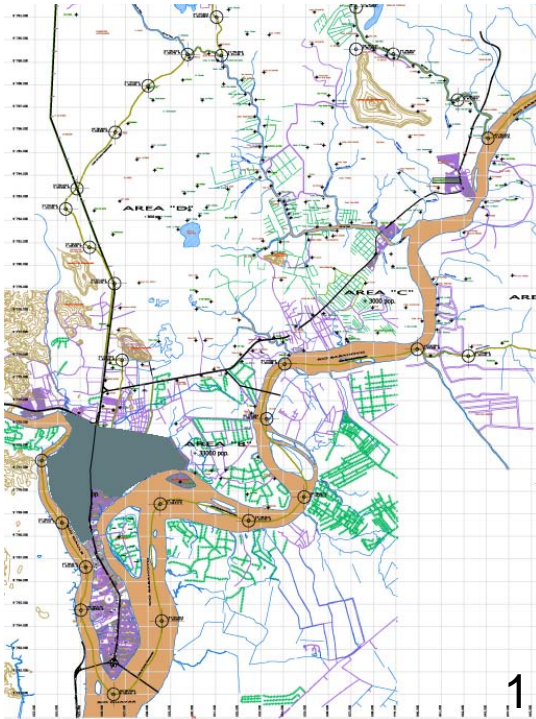
Canton Growth Projections



Projected Growth with no planned management

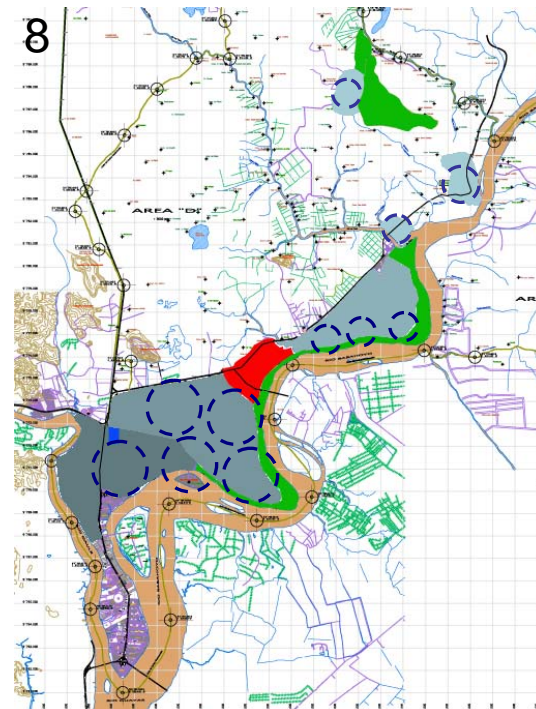
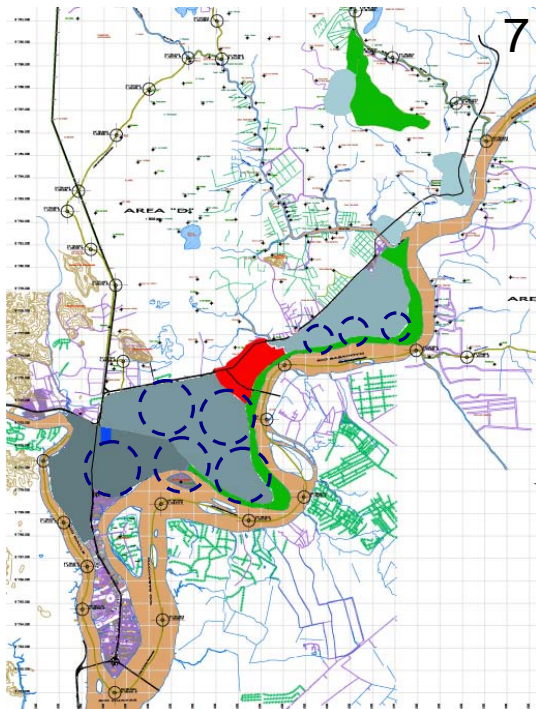
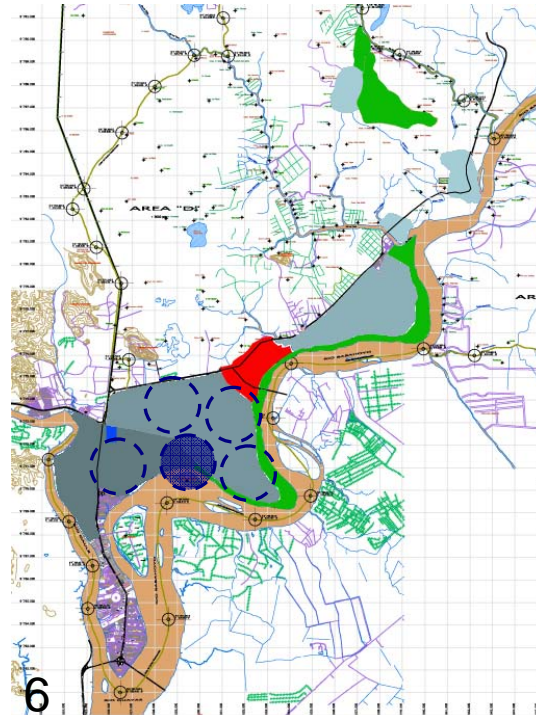
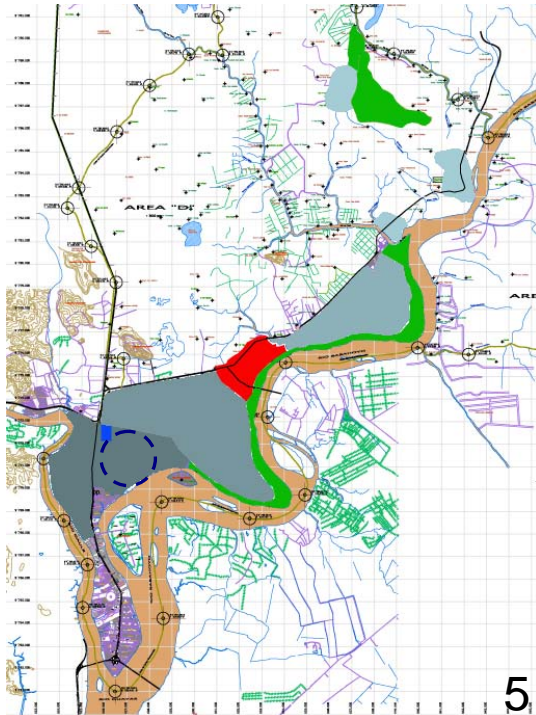


Canton Growth Framework Plan



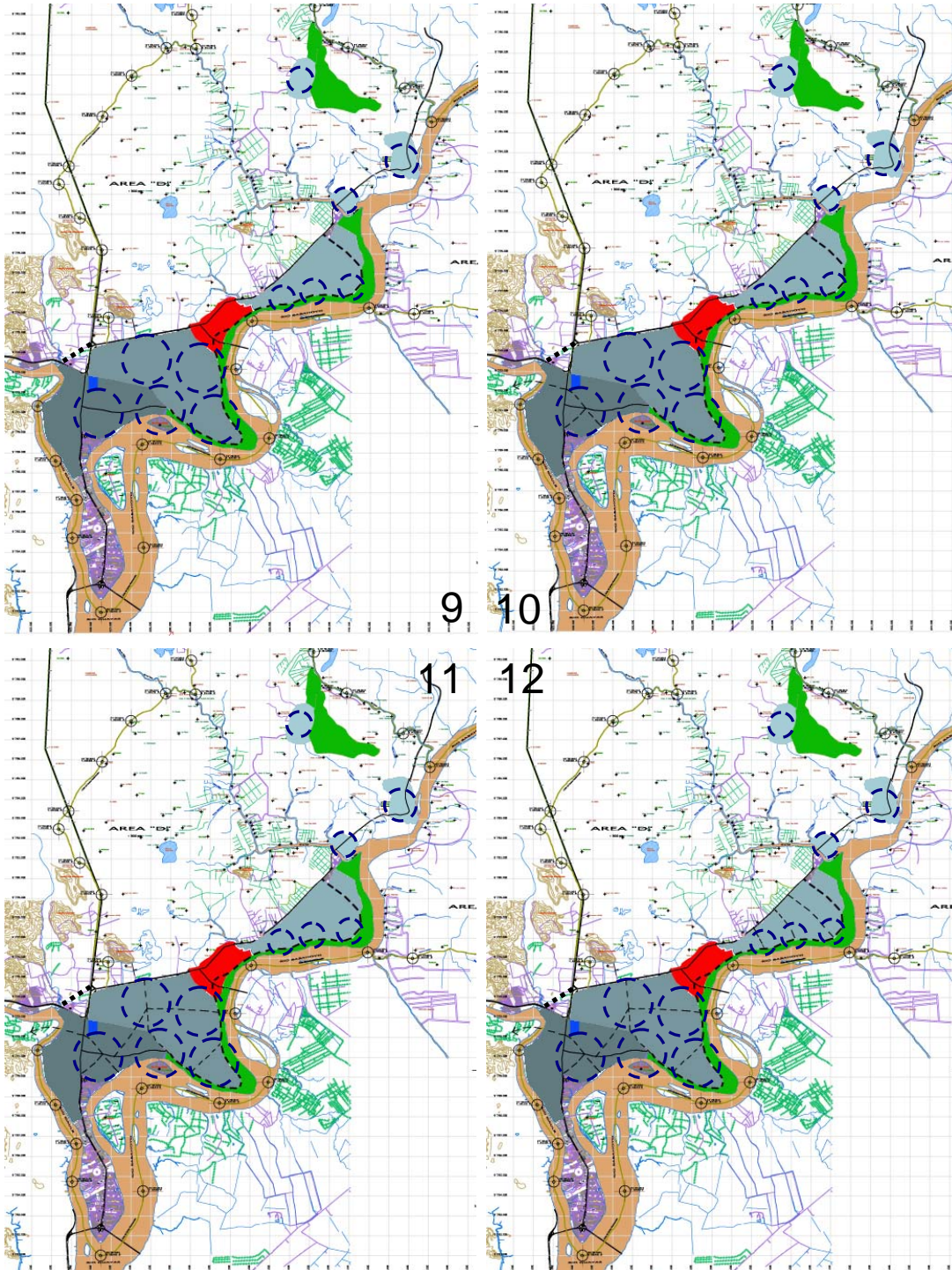
1. La Puntilla Growth Zone
2. Urban New Growth Zone
3. Traditional New Growth Zone
4. Traditional Area Growth Zone & New Tourist / Ecological Reserve

Canton Growth Framework Plan

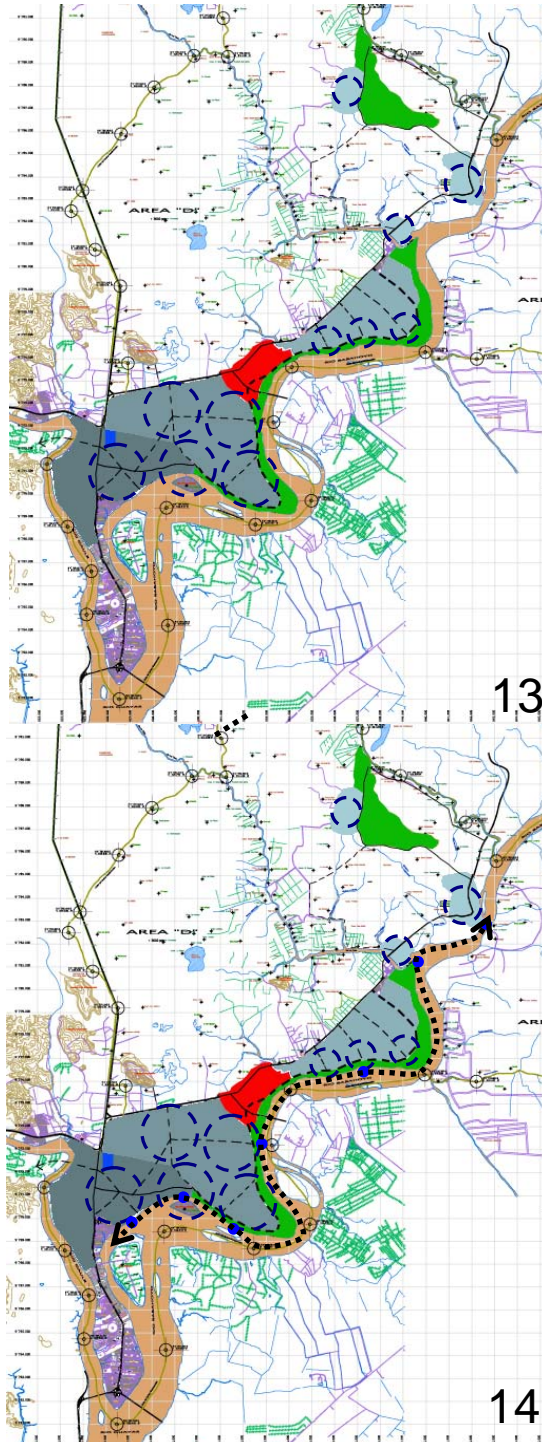


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5. Town Center 1
6. Town Centers 2, 3, 4
7. Town Centers 5 A, B, C
8. Samborondon, Tarifa, New Rural Village

Canton Growth Framework Plan



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9. Parkway
10. La Puntilla Secondary Roads
11. New Urban Zone Phase 1 Secondary Roads
12. New Urban Zone Phase 2 Secondary Roads



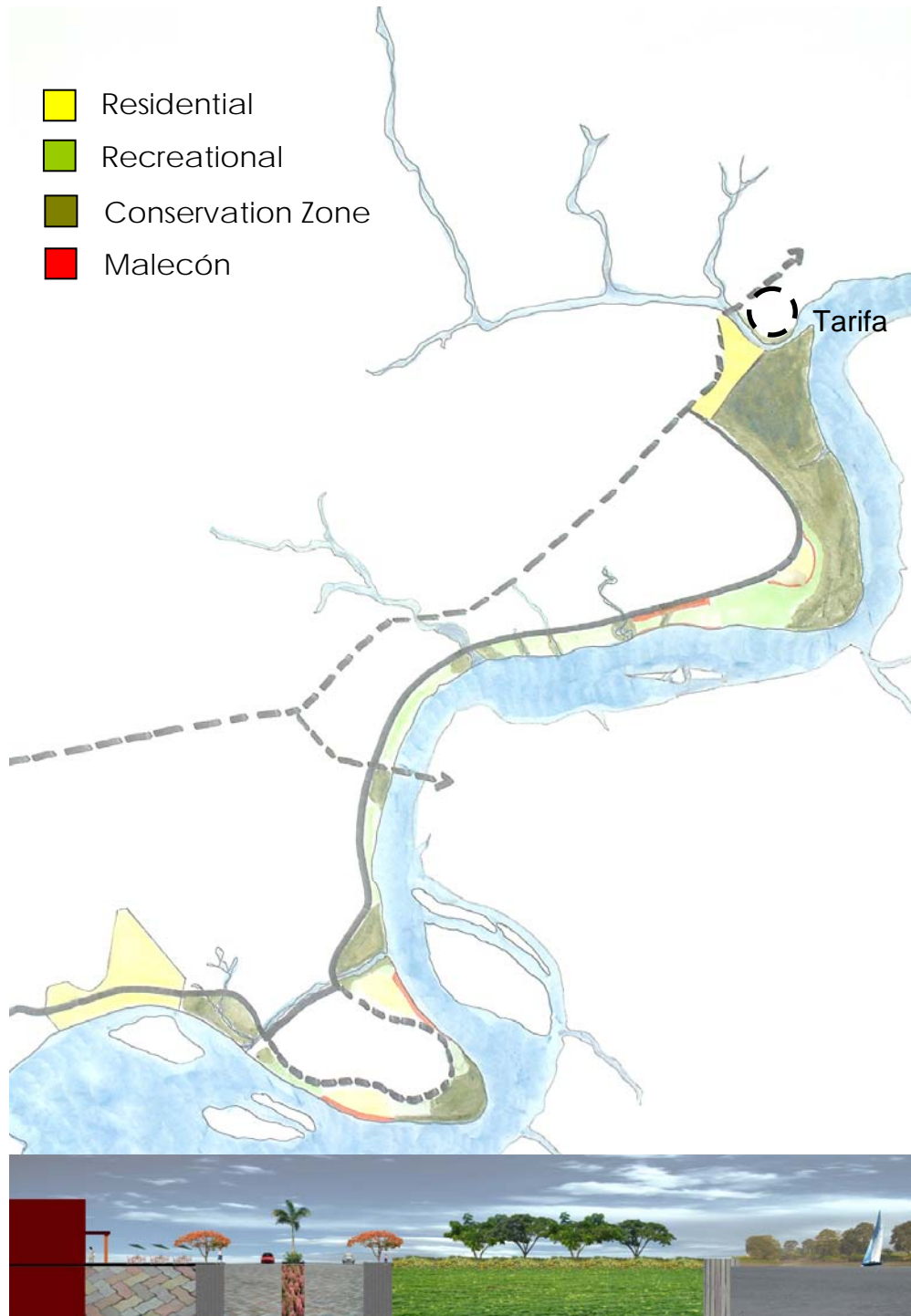
Canton Growth Framework Plan

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13. Traditional Zone Secondary Roads
14. Water Transportation

Samborondon Future Growth

Samborondon Future Growth											
	Existing & New Urban Growth Zones					Traditional Zone					
	New Town 1	New Town 2		New Town 3	New Town 4	New Growth 5 a,b,c	New Growth Existing Towns	O/I Zone	Civic/ Office	Conservation	Total New Population
Population	15,000	15,000	15,000	15,000	15,000	15,000	15,000	n/a	n/a	n/a	105,000
Residential Land Use (ha)											
Low	95	100		120	100	120	55				22125
Medium	80	70		80	115	75	75				37125
High	35	40		35	15	30	50				30750
Non-Residential Use (ha)											
Mixed Use	40	50		65	55	65	30				
Commercial	70	40		45	40	35	15				
Office/Industrial	15	40		20	25	15	10	100	50		
Public Space	65	60		35	50	60	25			1000	
Total Land Coverage (ha)	400	400		400	400	400	260	100	50	1000	3410

Parkway



The plan proposes a parkway that would run along the Babahoyo river. This parkway is separated from the river's edge by a green strip zoned with a variety of uses, including reserve zones (for flood areas), recreation, and more urban uses when the parkway goes through town centers. The parkway creates a link between the population and the river, and addresses several existing or potential problems.

Environment:

The river has not had many changes in its natural structure. The river serves neighboring communities, that depend on it at various levels. These conditions can only exist as long as there is a link between the people and the river. The parkway creates spaces that link different settlements, both existing and projected, and respect the river's edge, creating zones for different uses such as recreation, urban and preservation.

Flood Control

The parkway serves as a flood control device. By staying at least 50 m from the river's edge, it creates a green strip that buffer's the river's behavior. Technically, the parkway does not behave as a dam, but as a boundary that allows sufficient flood plain reserve areas in zones where the river is most aggressive.

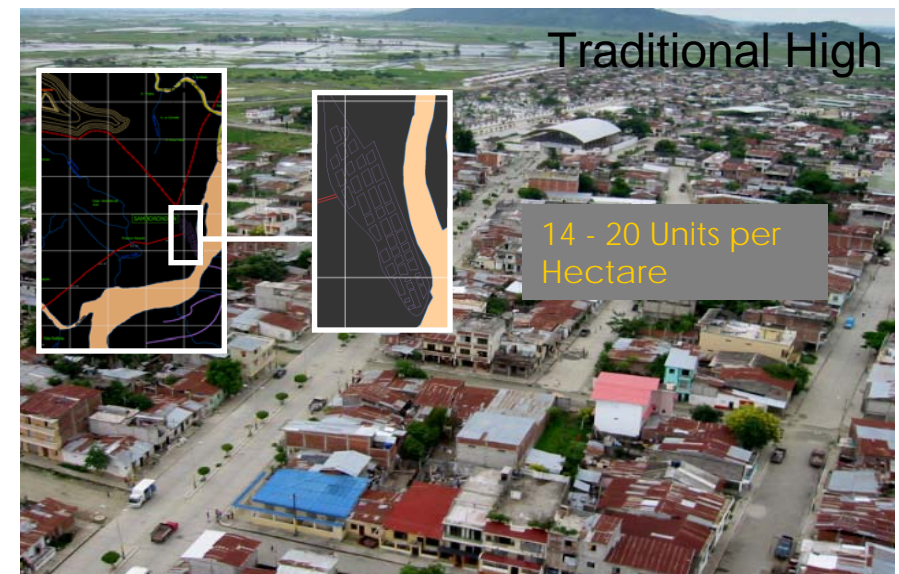
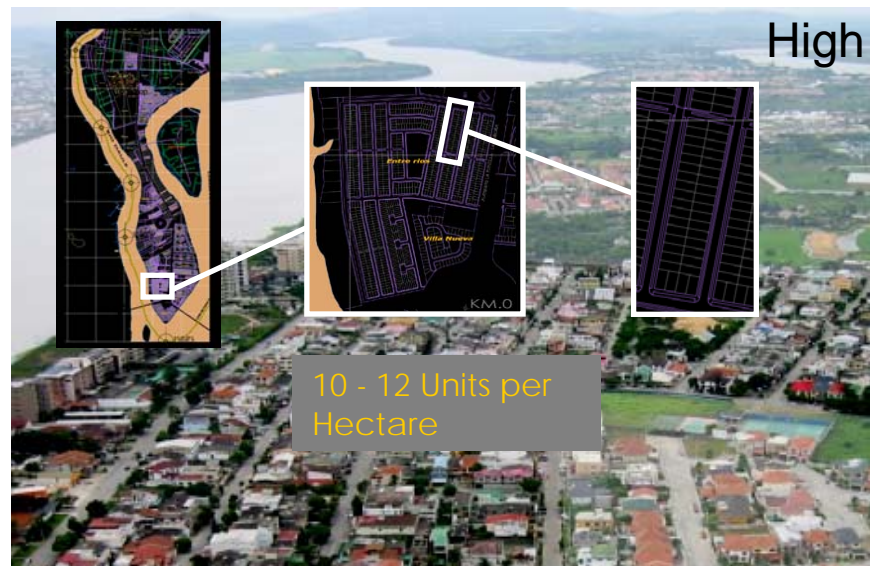
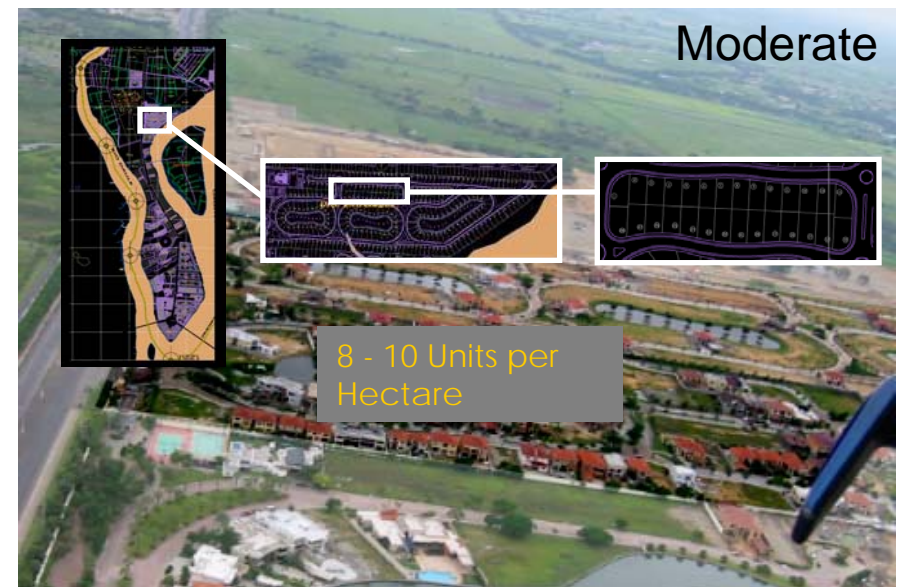
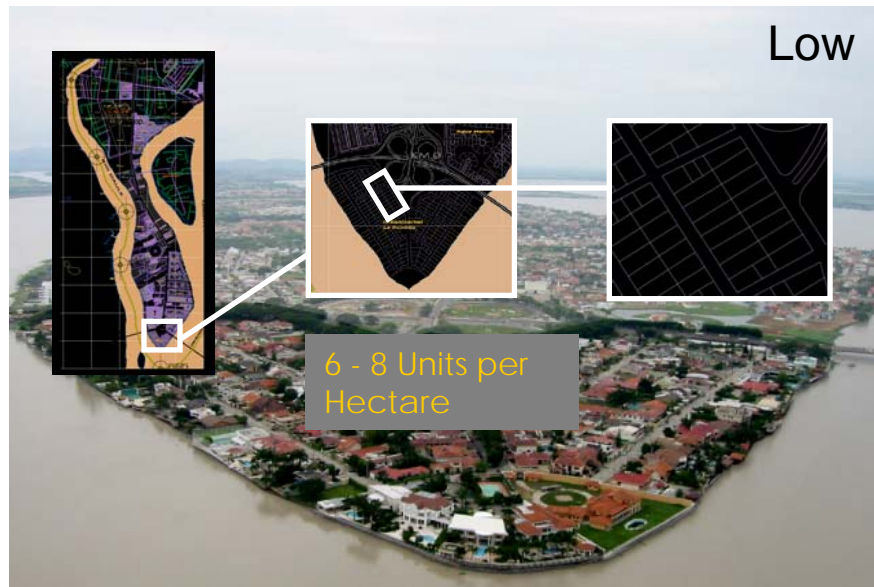
Connection

The river is a public space and as such should serve the whole community and not just a privileged few. If the river's edge is treated as a public space with access to the river, it will once again serve as a space for transportation, recreation and connection.

Identity

While serving as environmental protection, flood control, and connection device, the parkway achieves a more important purpose, creating a strong public space, directly connected with the area's unique geography and cultural traditions. It links the urban with the rural, the gated communities with the traditional towns with the new proposed town centers, gathering them as a whole but respecting their individual characteristics. With the parkway as a focal point the area, instead of acting as a series of developments, can become a community.

Types of Density in the General Vicinity





Urban Growth Zones

*5 New Towns Including
North La Puntilla & Ciudad Celeste*

- a. Existing Urbanization Zone: "La Puntilla"*
- b. New Urban Growth Zone*



There are 5 new town centers proposed, 2 in the existing Urbanization Zone of La Puntilla, one of which is the existing Ciudad Celeste, and 3 in a newly proposed “New Urban Growth Zone”. The town centers each would have the following similar characteristics

- Each is to have a Town Center with mixed use development and basic urban equipment and services
- Town Centers would begin to develop first through a public private partnership and would develop in an incremental and phased fashion
- Additional residential development would occur over time with absorption rates, densities and housing types supported by the market

Roads and Infrastructure in these two zones would have the following characteristics:

- The Parkway would develop incrementally with public financing through existing and future property taxes
- Primary public connector roads would be developed by private developers of adjacent parcels
- Water and Sewer services would develop as needed for each town through joint public and private financing

Urban Growth Zones





PERIMETRAL: La Puntilla



PERIMETRAL: Future Civic Center and Bridge Connection



BUIJO HISTORICO & CIUDAD CELESTE



FUTURE NEW TOWN CENTER 4



FUTURE NEW TOWN CENTER 4



ROAD TO SAMBORONDON: near P.A.N.



P.A.N.



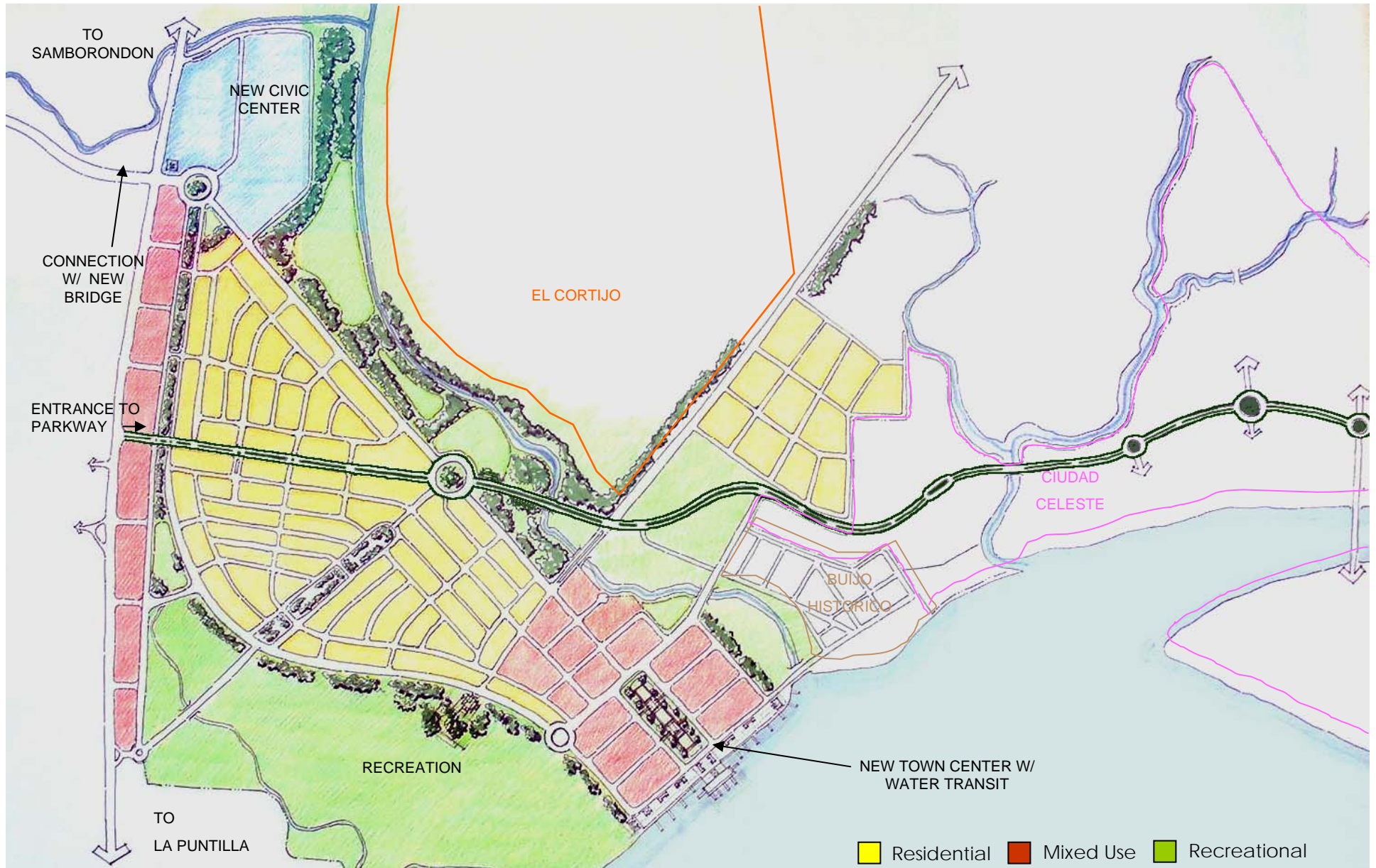
NORTH LA PUNTILLA



NEW URBANIZATION ZONE

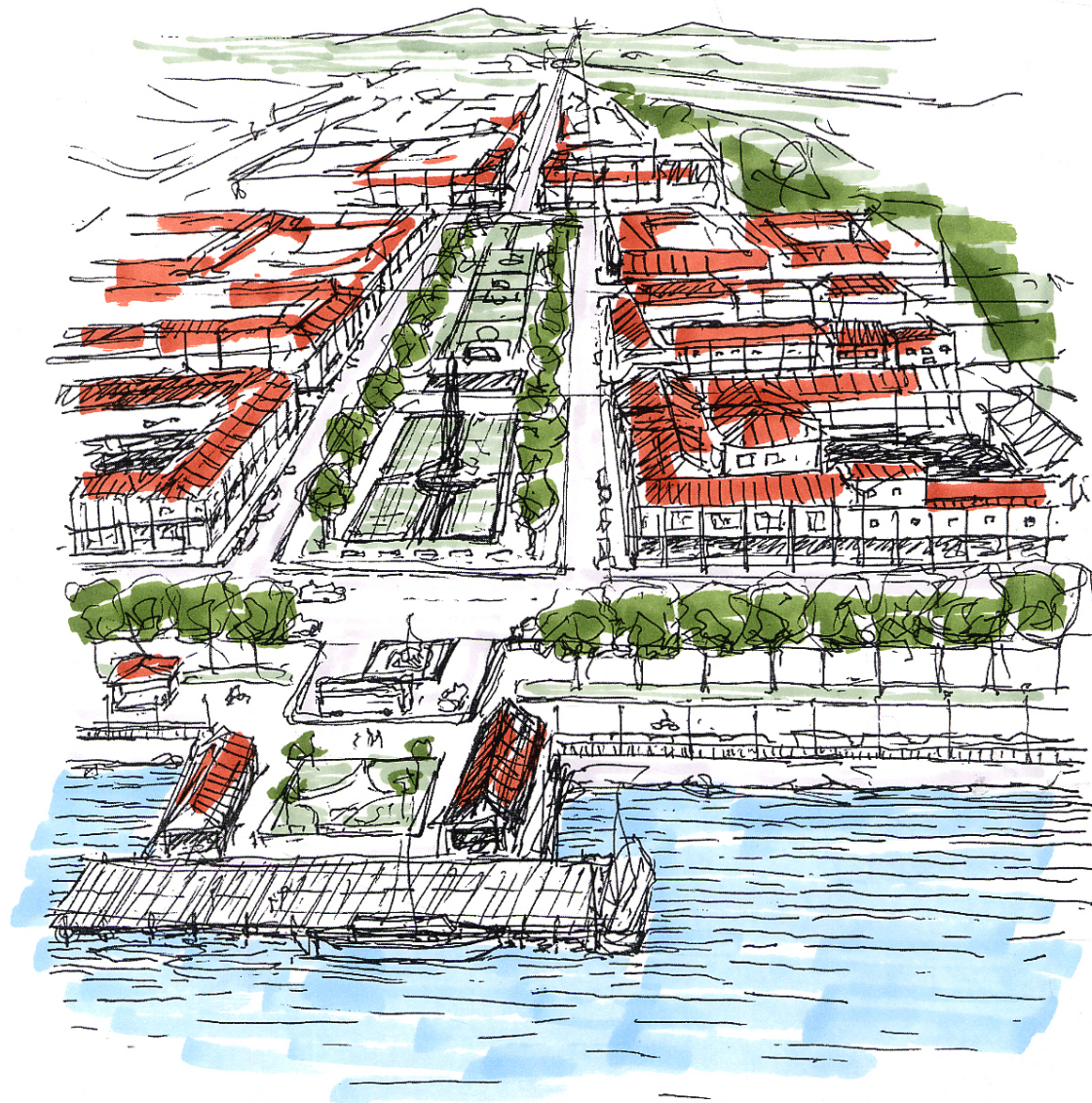
Town Center 1

Existing Urbanization Zone

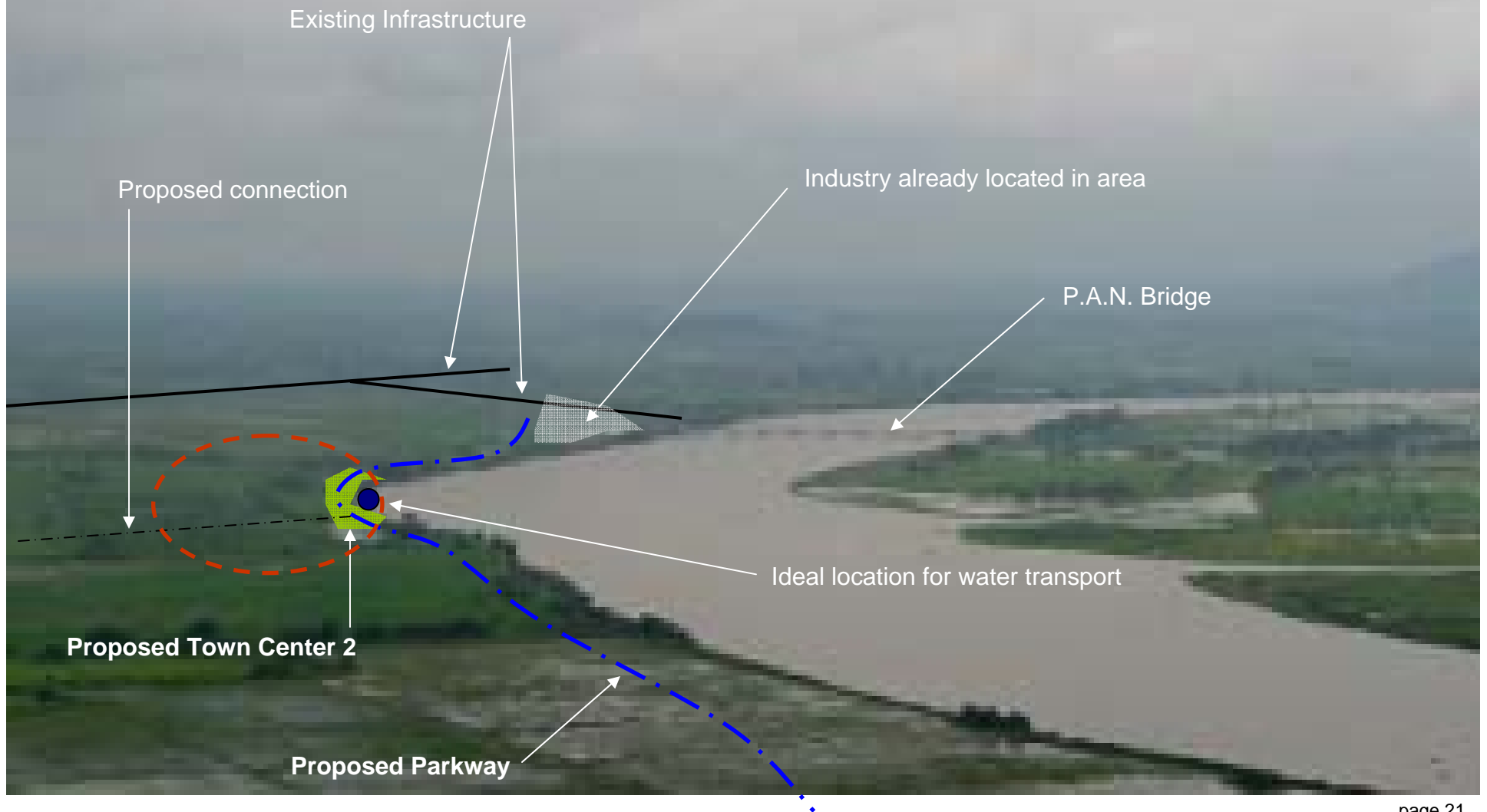




NEW TOWN CENTER: NORTH LA PUNTILLA



Town Center 2 New Urban Growth Zone



Town Center 2 Plan



Town Center 2



Open Space



Streetscape and Building Scale

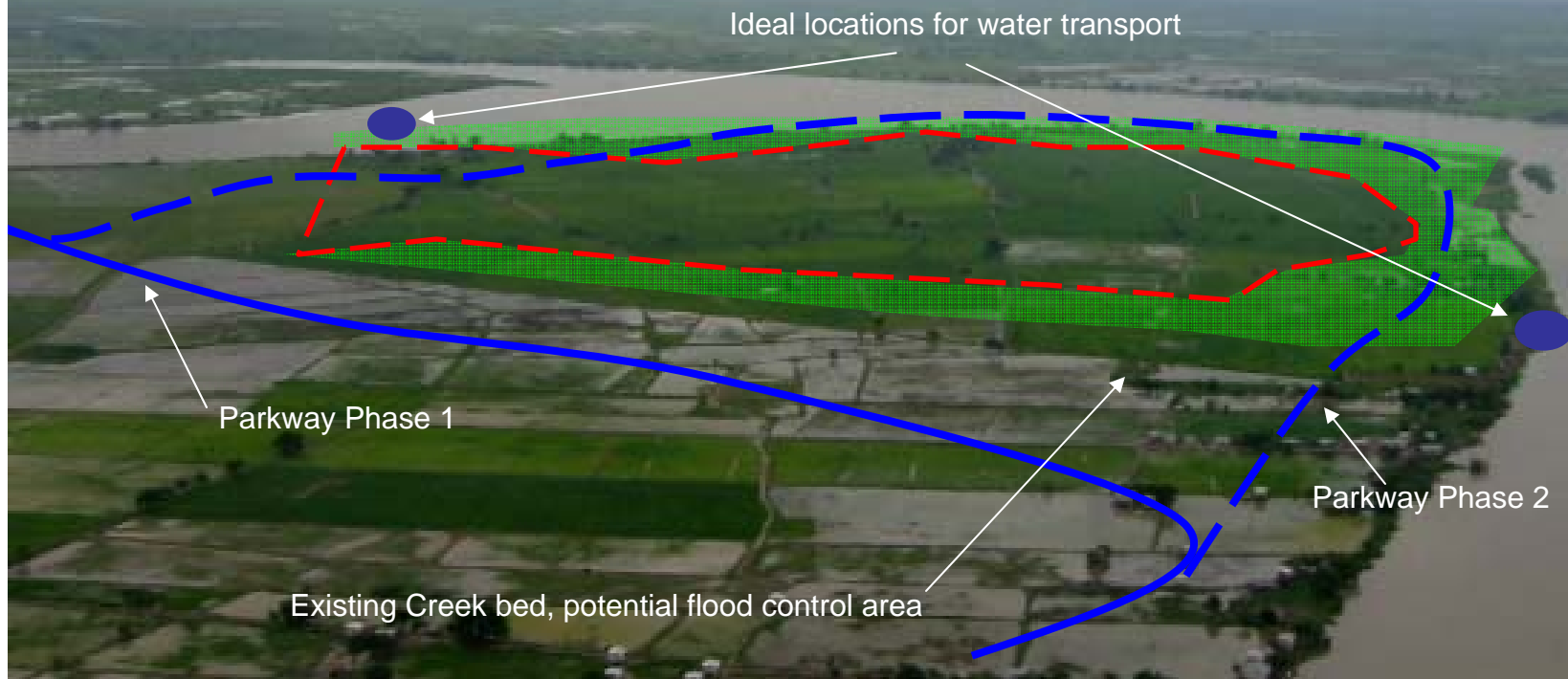


Single Family Housing



The Waterfront

Town Center 4 New Urban Growth Zone



Town Center 4



Town Center 4





Traditional Zones

4 Growth Management Areas

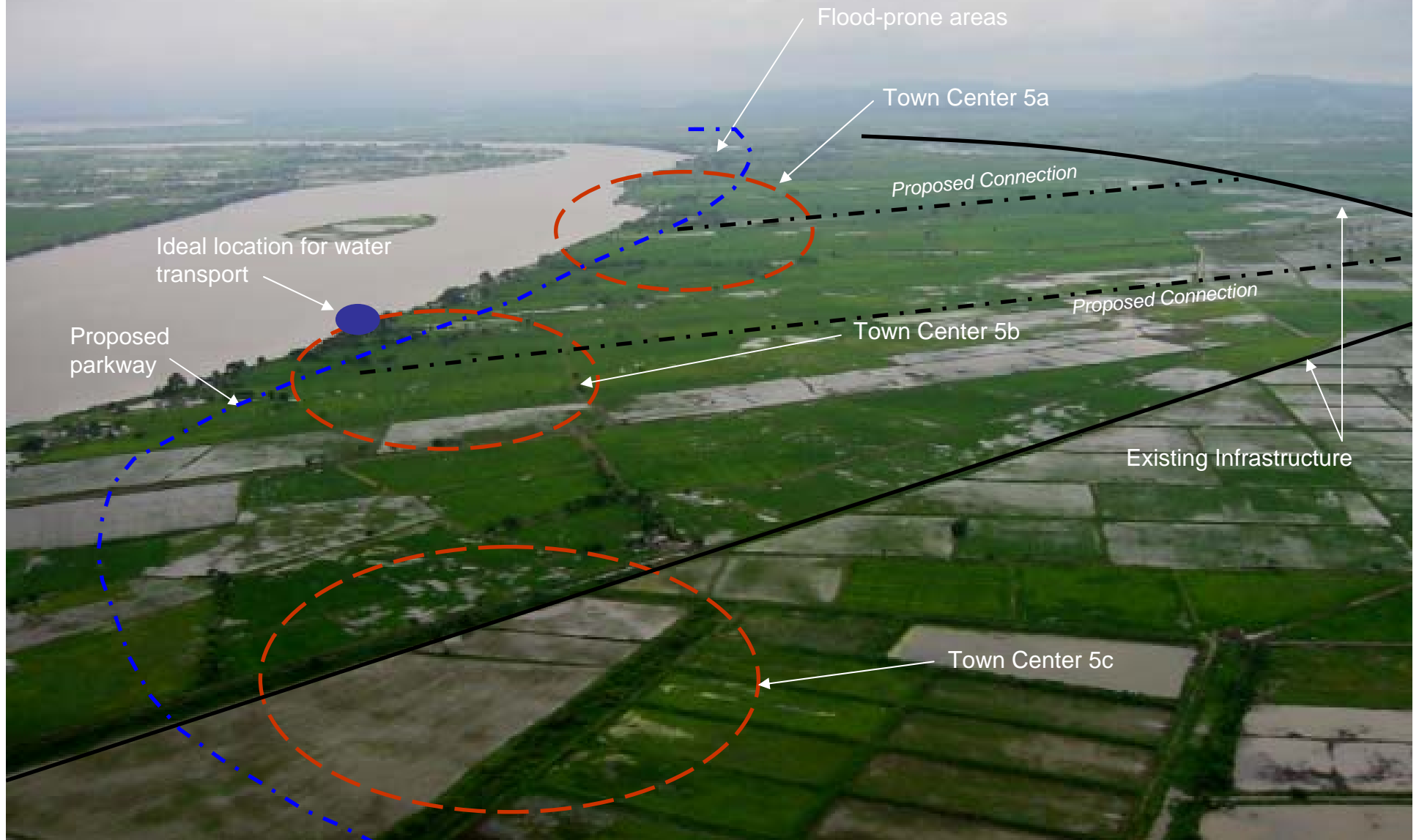
- a. Traditional New Growth Zone*
- b. Existing Towns*
- c. Rural Village/Eco Tourism Zone*
- d. Agricultural Zone*



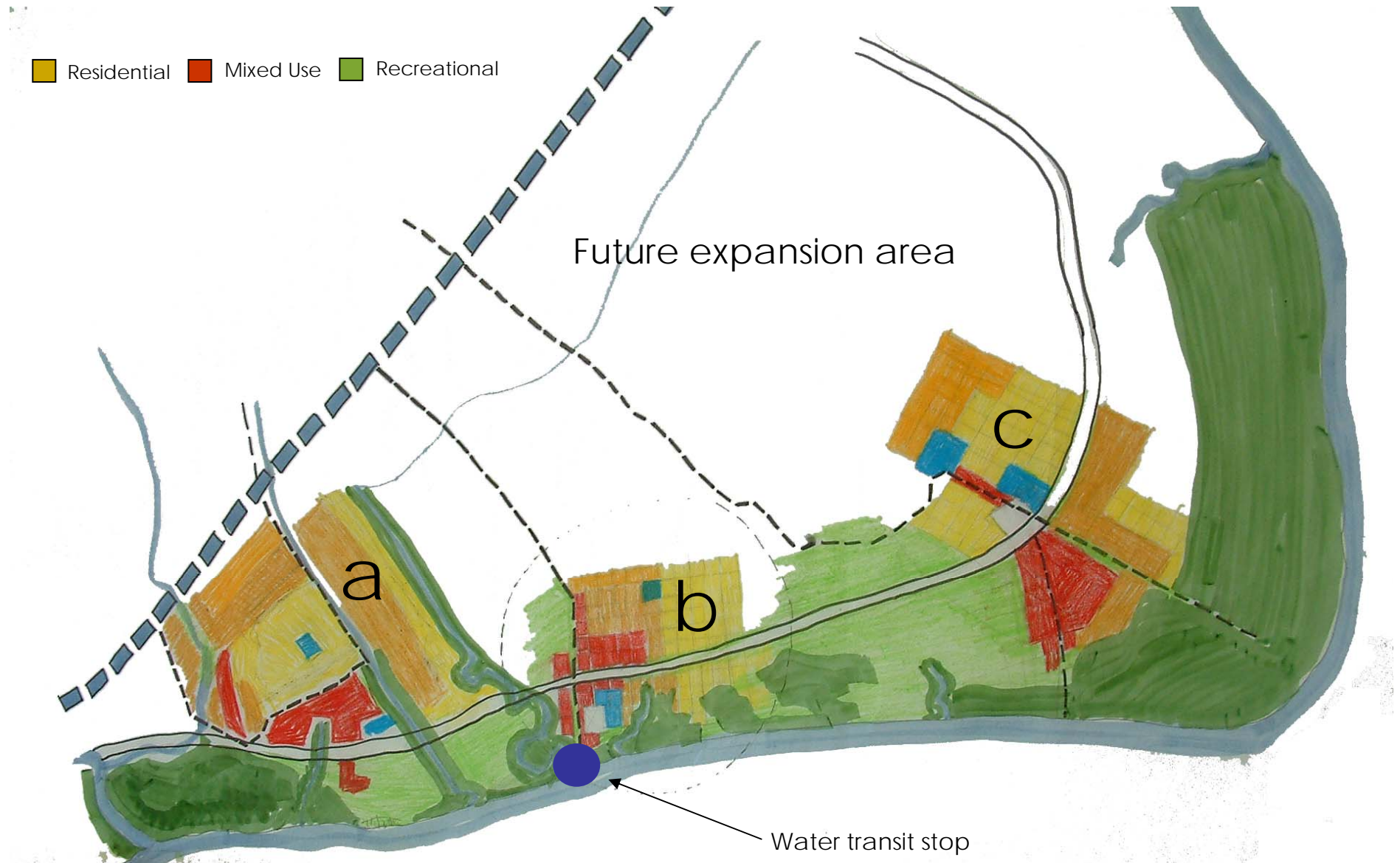
The Traditional Area of the Canton is separated into 4 zones, each of which has unique characteristics that should be considered for managing growth in these areas. They include:

- **Traditional New Growth Zone**
Three small new towns would be located here, together totaling 15,000 population. They would be developed incrementally and based primarily on jobs created by new office and light industrial development in the area of the New North Bridge.
- **Existing Towns**
This zone contains the controlled growth of the existing towns of Tarifa, Boca de Cana, and Samborondon, each with strict design and density controls to insure development compatible with traditional urbanism and building typologies
- **Rural Village/Eco Tourism Zone**
This zone, north of the town of Samborondon, contains a small new rural village to support growth in the recintos and possible eco-tourism development around Santa Ana Hill
- **Agricultural Zone**
Controlled incremental growth in the recintos with adequate accessibility and services to continue to support the Canton's important agricultural base and strict controls on development of other types are contained in this large zone in the heart of the Canton.

Town Centers 5 a, b, and c Traditional New Growth Zone



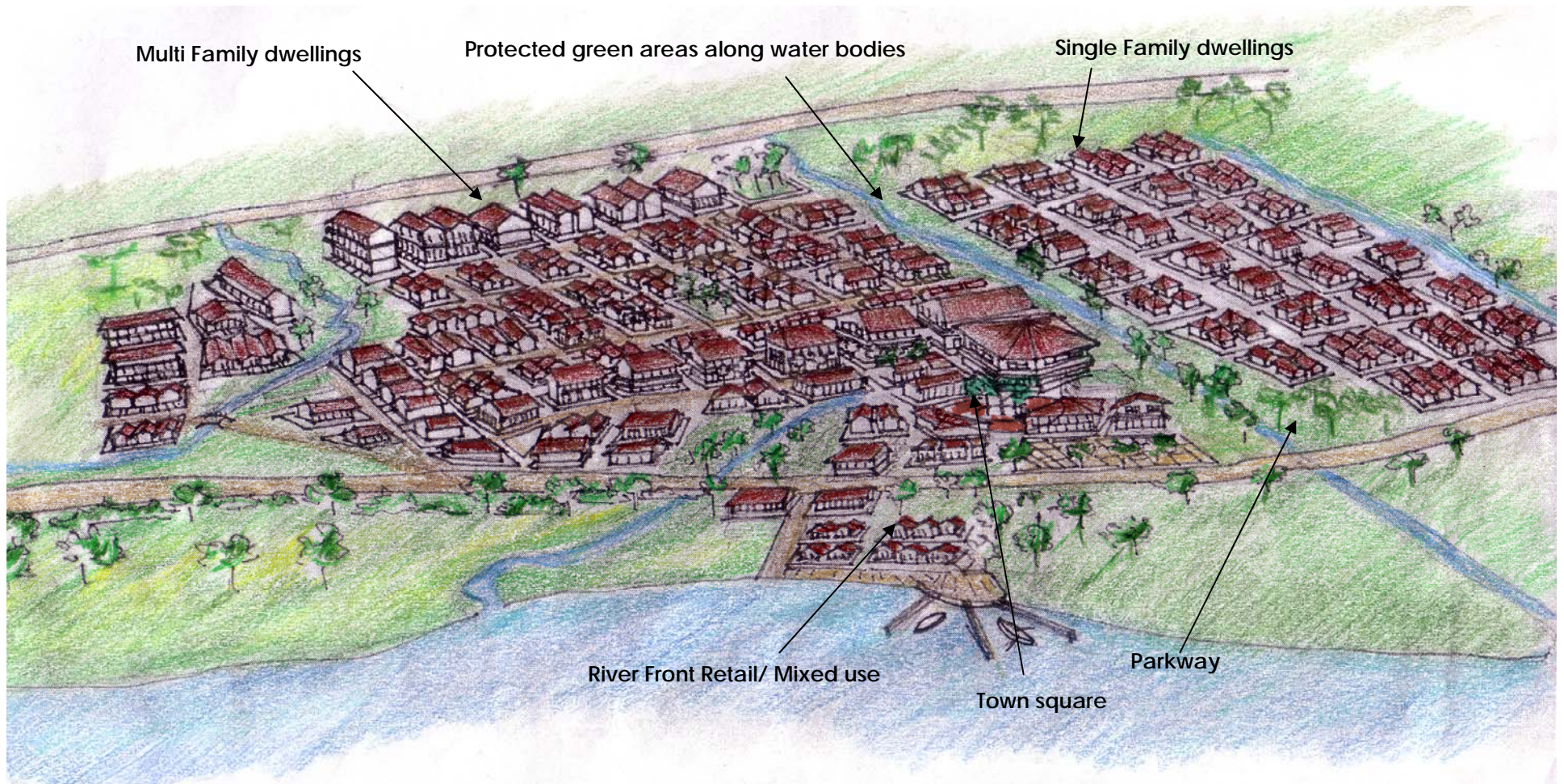
Towns Centers 5a, b, c Plan



Town Center 5a Plan



Town Center 5b Perspective Sketch

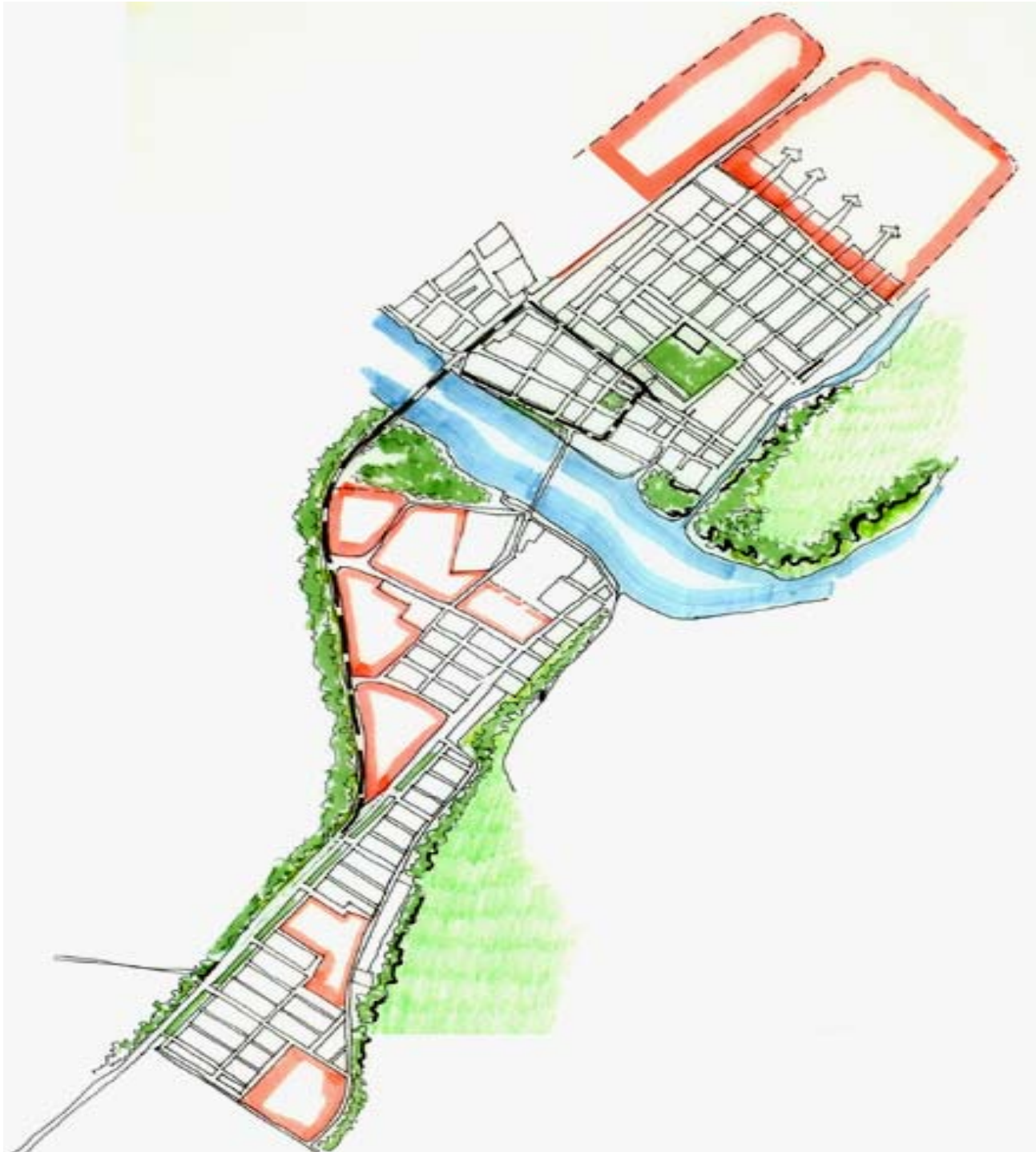


Boca de Caña Existing Towns Zone



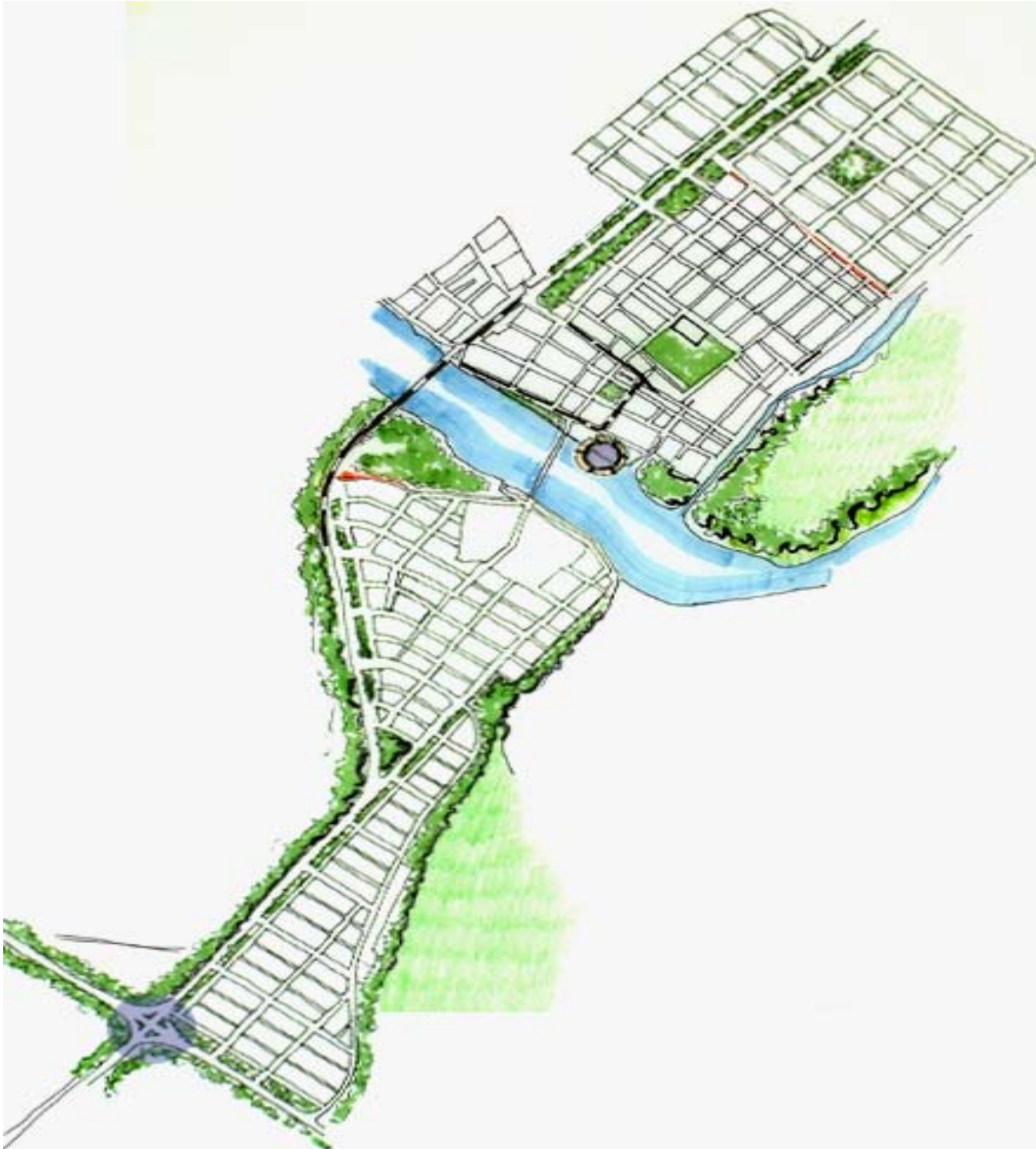
Tarifa Existing Towns Zone





Boca de Caña and Tarifa

Existing development
with growth areas



Boca de Caña
and Tarifa

Proposed

Characteristics Tarifa and Boca de Caña

Approximate Density:

- 17 dwelling units/hectare

Streets

- Grid pattern of streets
- 60% paved roads

Typical Block

- 60 meters x 80 meters
- Contains approximately 15 housing units

Housing Units

- Contain approximately 4.6 persons
- 1-3 stories
- 55% concrete masonry units
- 40% mixed construction
- 5% sugar cane



Sambovondon Existing Towns Zone





Samborondon

Existing towns zone

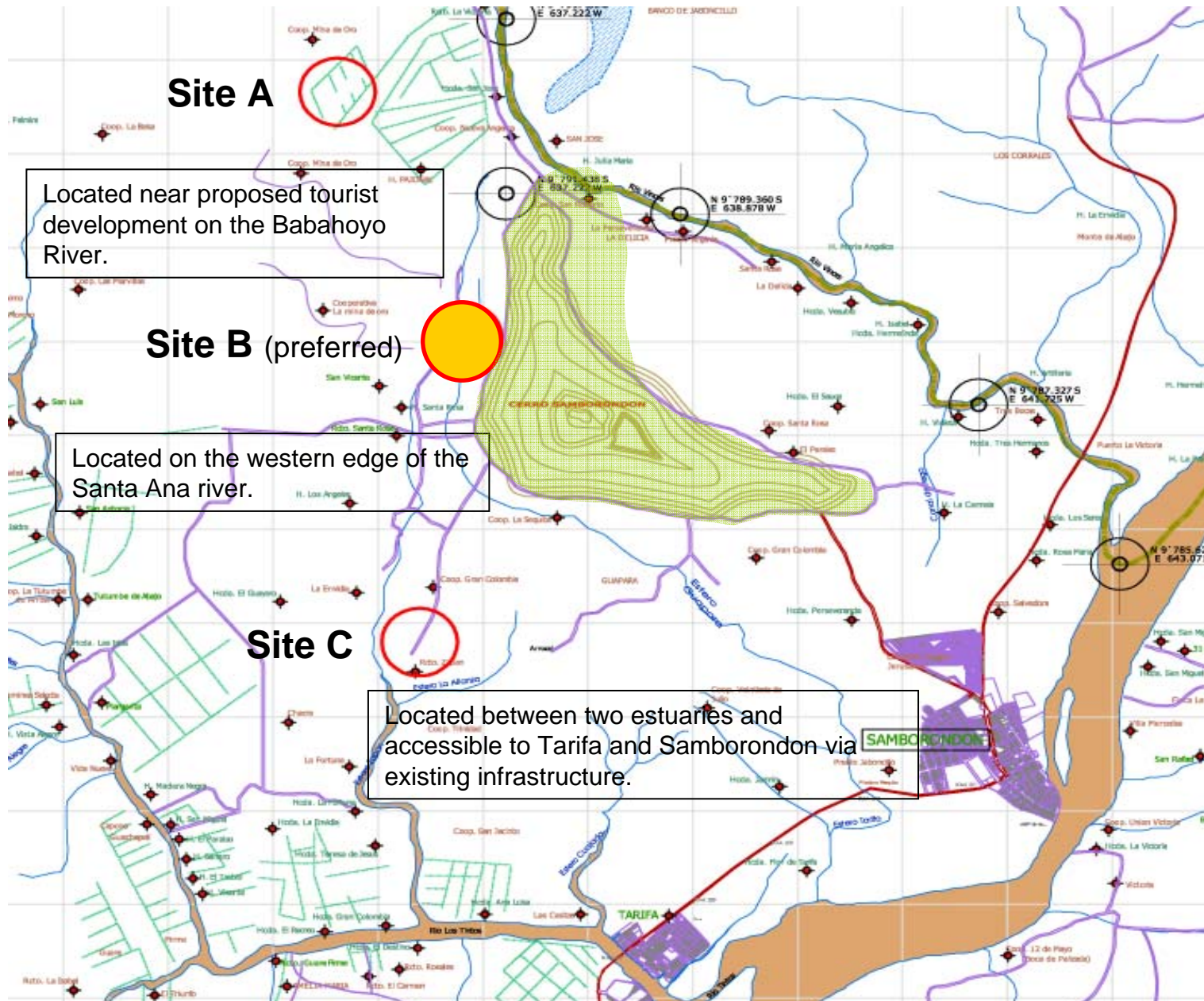


Samborondon

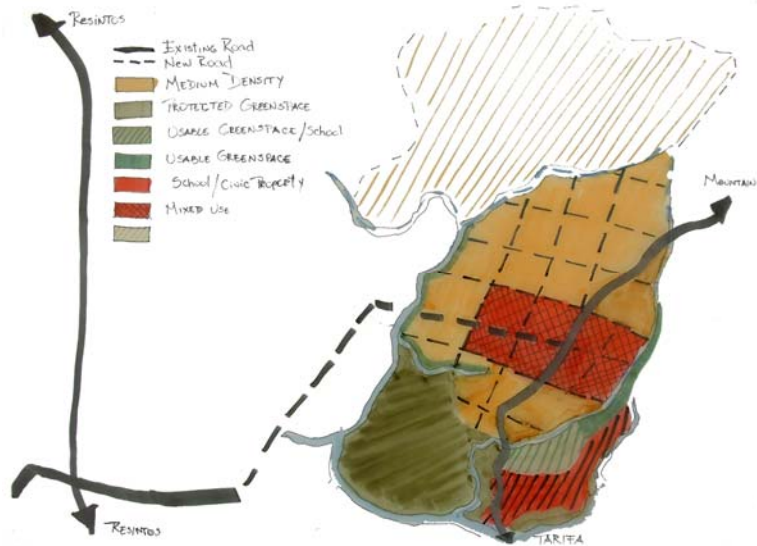
Existing Towns
Zone

Proposed

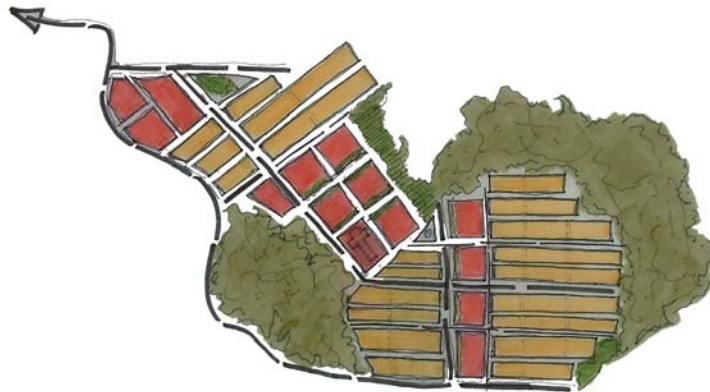
Potential Rural Town Center & Eco-Tourism Zone



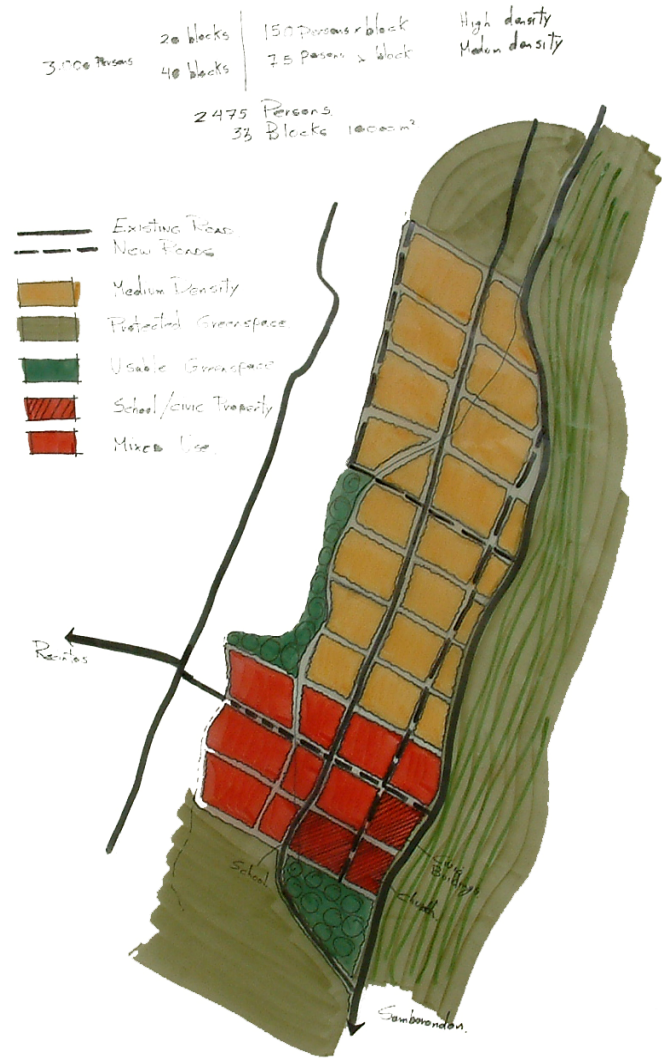
Rural Town Center Options



option A



option C



option B (preferred)

Samborondon, Eco Tourism Zone & New Rural Village

General Growth Areas





Development Strategies




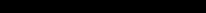


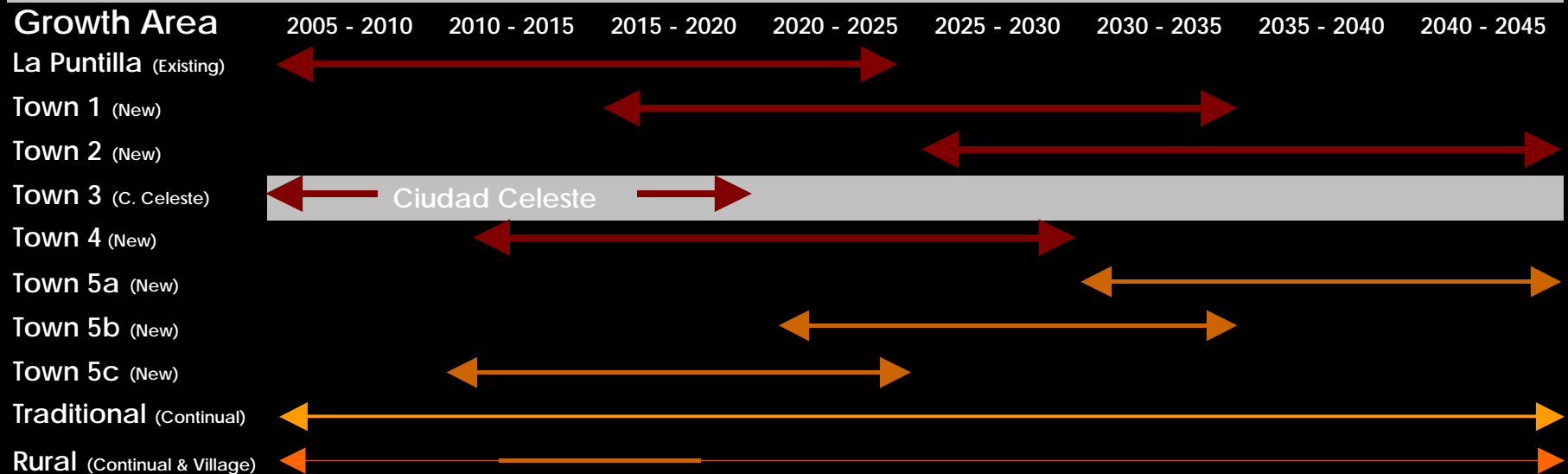


1. Create a strong but flexible regulatory framework to govern growth which should include at least:
 - Designation of both High Growth Zones and Low Growth Zones with provision to buy and trade development rights from one zone to the other to create more equity in the ownership patterns
 - Both zoning and subdivision ordinances to set standards in growth zones which are tailored to the unique configurations of both traditional and new development.
2. Create a development entity (preferably a partnership between the public and private sectors) that can be responsible for developing the high growth zone including, including planning, marketing, and advance land acquisition and development of roads and infrastructure necessary to attract new development.
3. Create sources of income to help finance early development of infrastructure and acquisition of land, including at least:
 - Voluntary income tax contributions
 - Capture future property tax revenues to help finance early development costs
 - Create a land trust revolving fund to help purchase land in advance of development paying off loans and grants with future land sales proceeds.

Phasing

Possible Phasing -- Infrastructure Investments & Residential Buildout*

	100 - 150 New units per year & Necessary infrastructure	Range of average units added per year: Min: 400 -- Max: 600
	75 - 100 New units per year & Necessary infrastructure	Highest Average units per year for 5-year period: 840
	50 - 75 New units per year & Necessary infrastructure	Min new units: 16025 -- Min new population: 80125
	25 - 50 New units per year & Necessary infrastructure	Max new units: 23900 -- Max new population: 119500



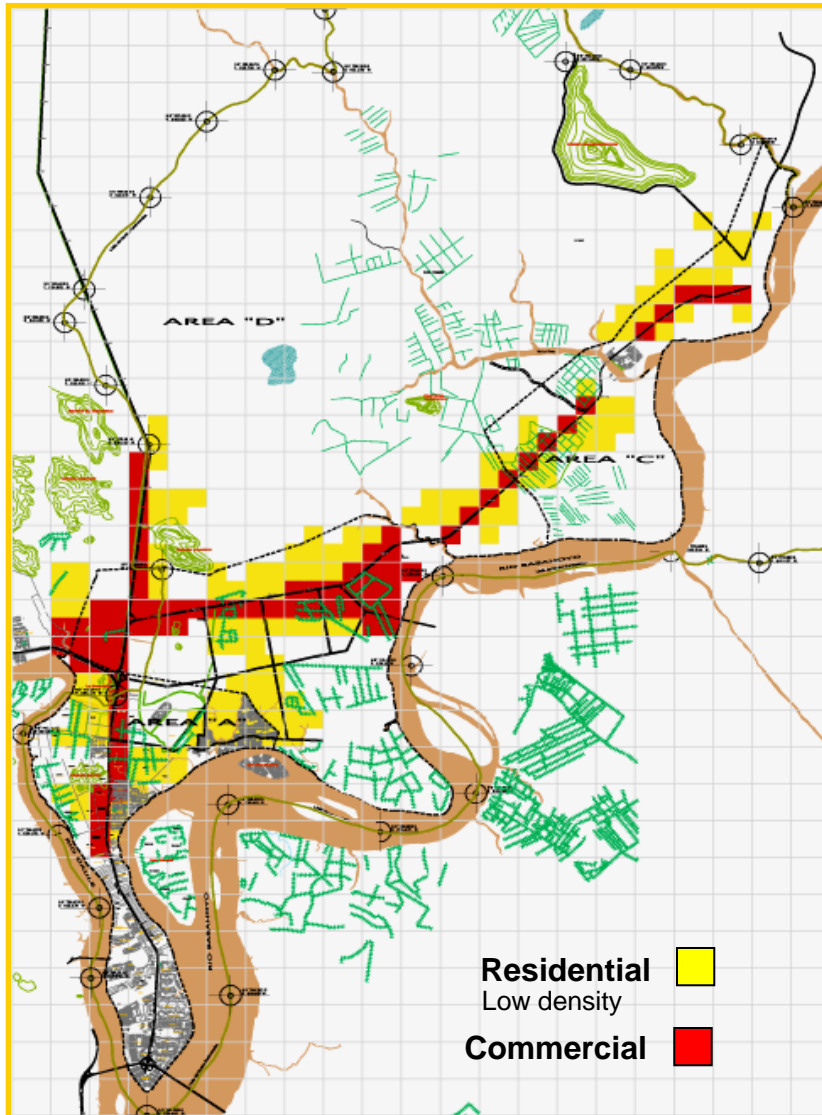
* Buildout for largest settlements assumed to be 20 years, 15 years for smaller settlements, and continual growth in rural/traditional

	2005 - 2010	2010 - 2015	2015 - 2020	2020 - 2025	2025 - 2030	2030 - 2035	2035 - 2040	2040 - 2045	tot units
Range (new units per year)	275	465	565	525	450	425	250	250	16025
	425	690	840	775	675	625	375	375	23900

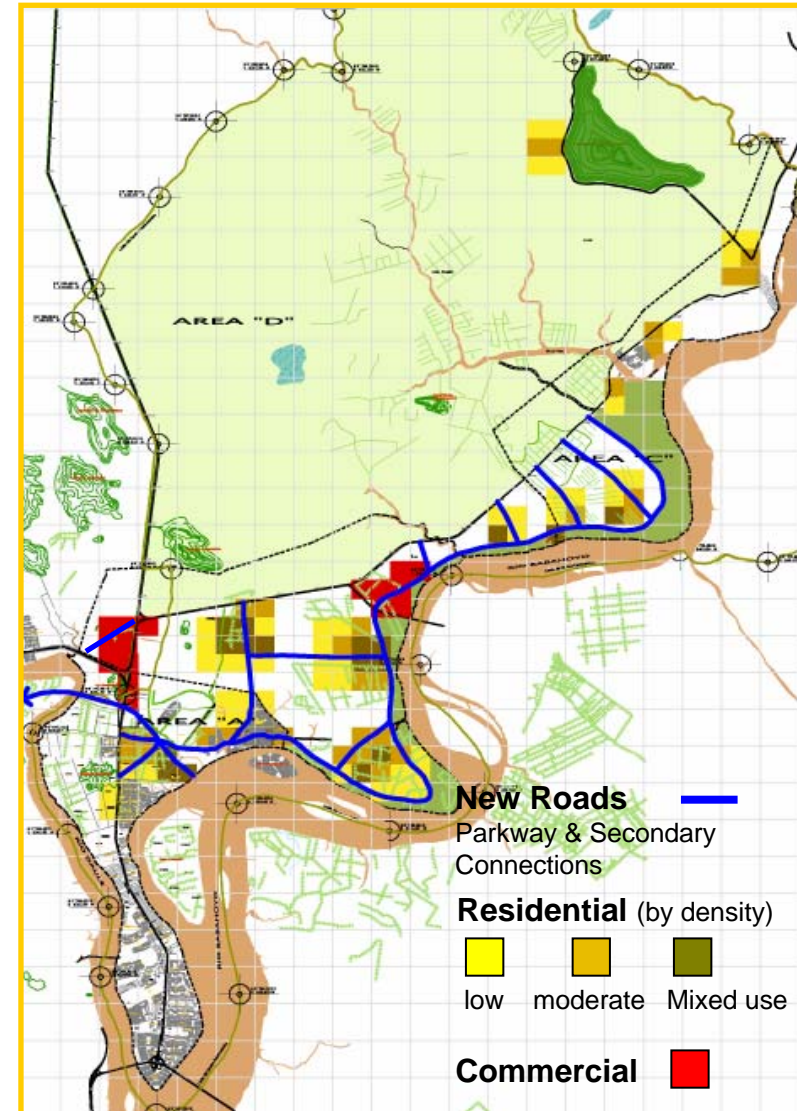
Growth Comparison

(2005 – 2045)

Continued Unmanaged Growth

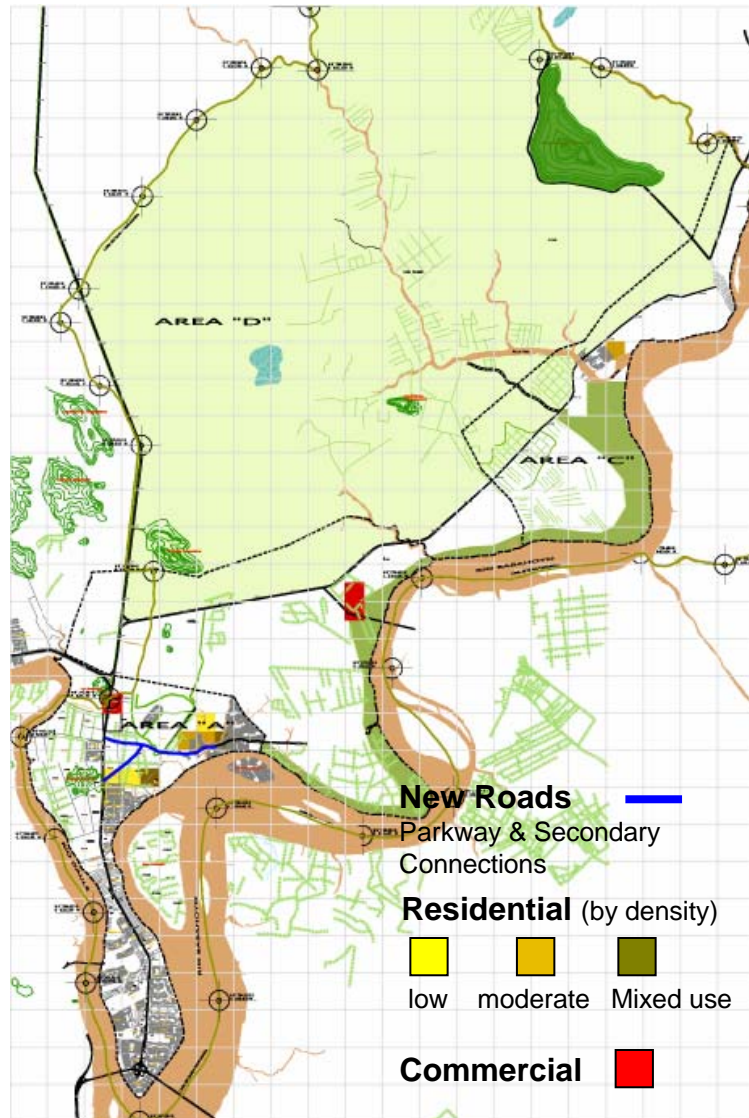


Planned Growth

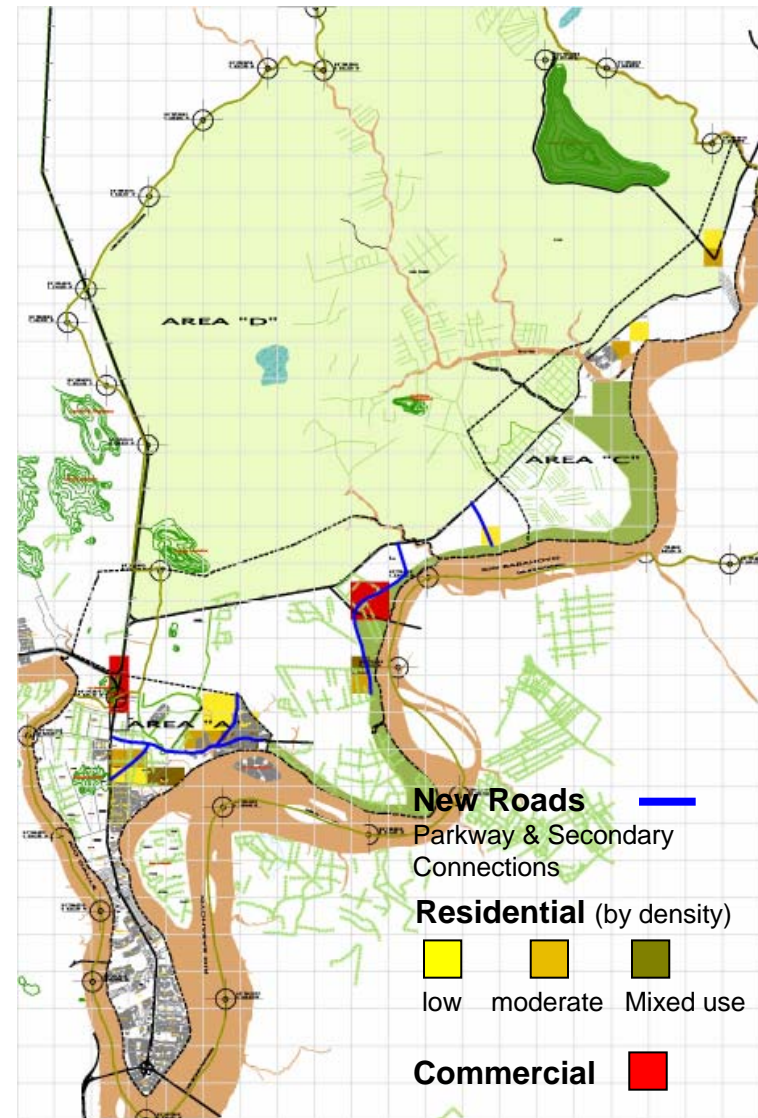


CANTON GROWTH FRAMEWORK PLAN

2005 - 2010

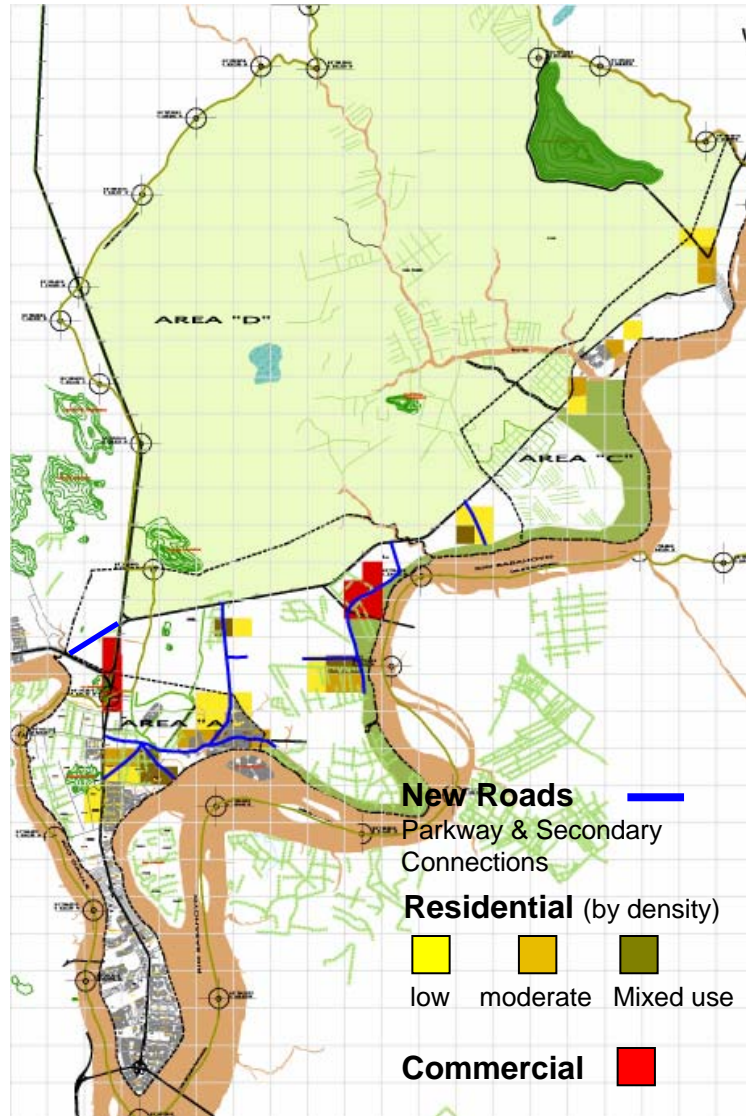


2010 - 2015

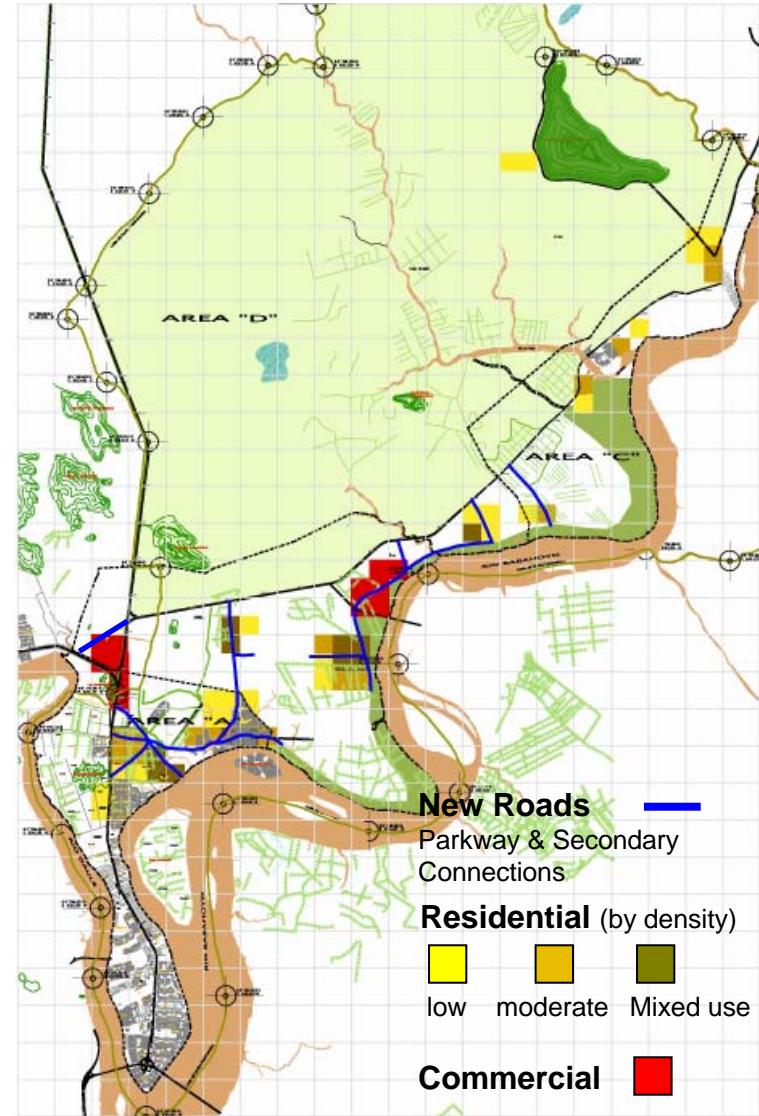


CANTON GROWTH FRAMEWORK PLAN

2015 - 2020

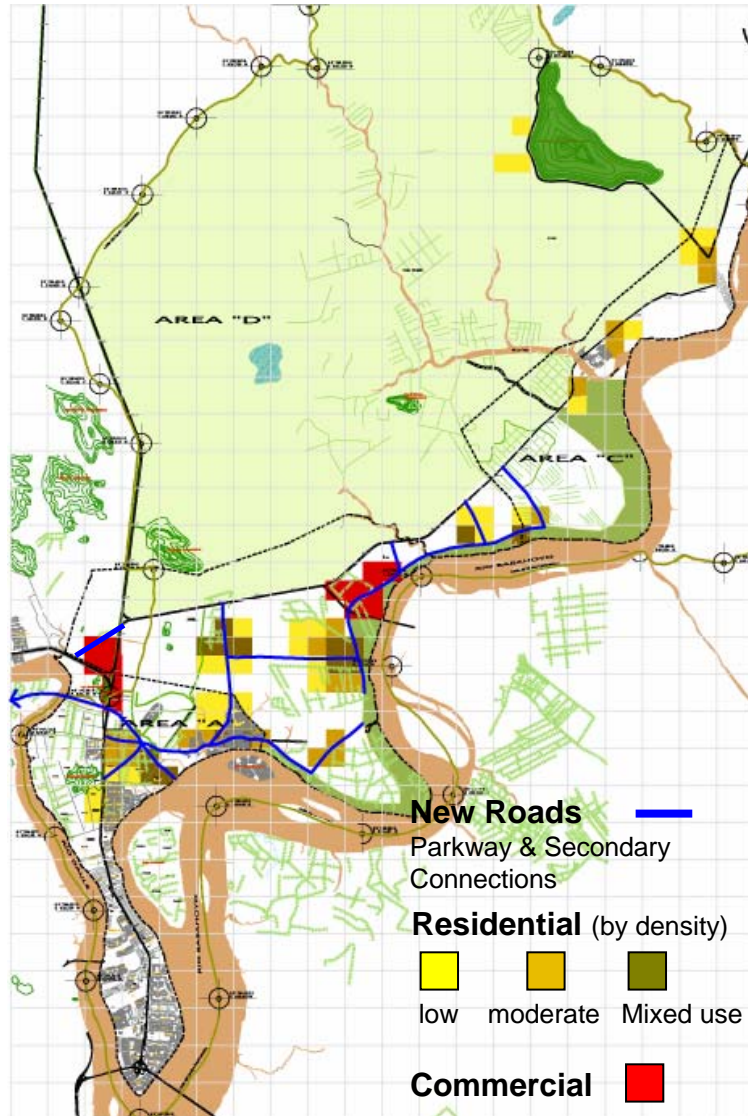


2020 - 2025

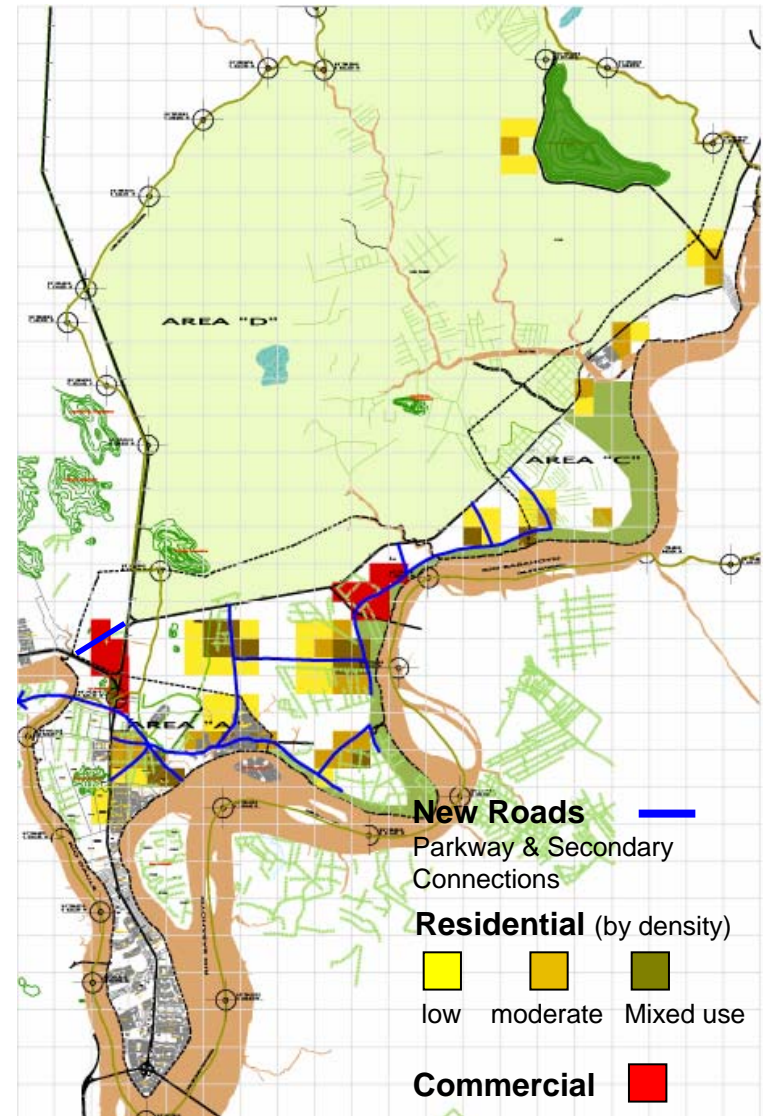


CANTON GROWTH FRAMEWORK PLAN

2025 - 2030

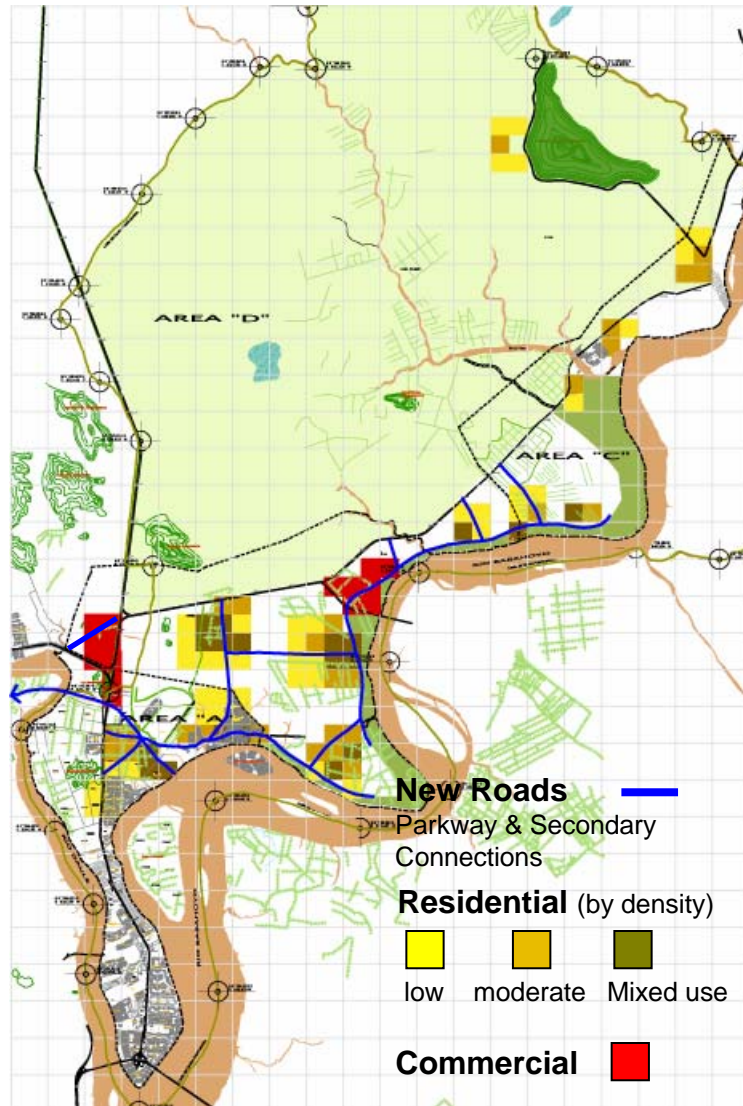


2030 - 2035

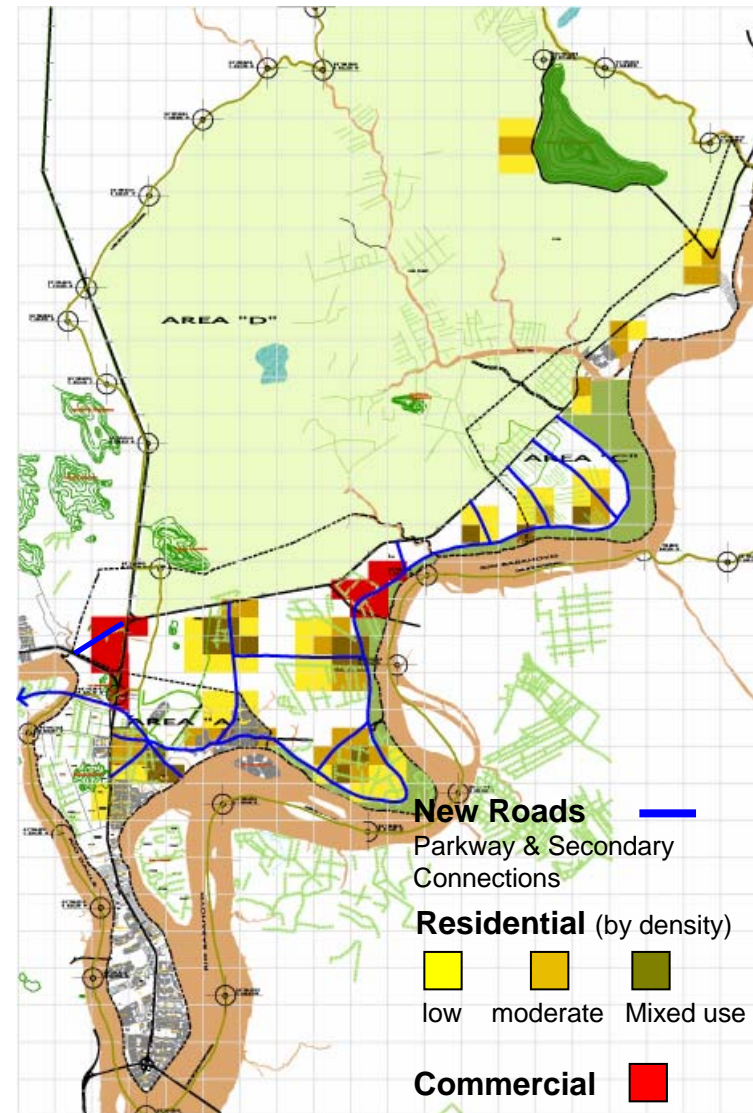


CANTON GROWTH FRAMEWORK PLAN

2035 - 2040



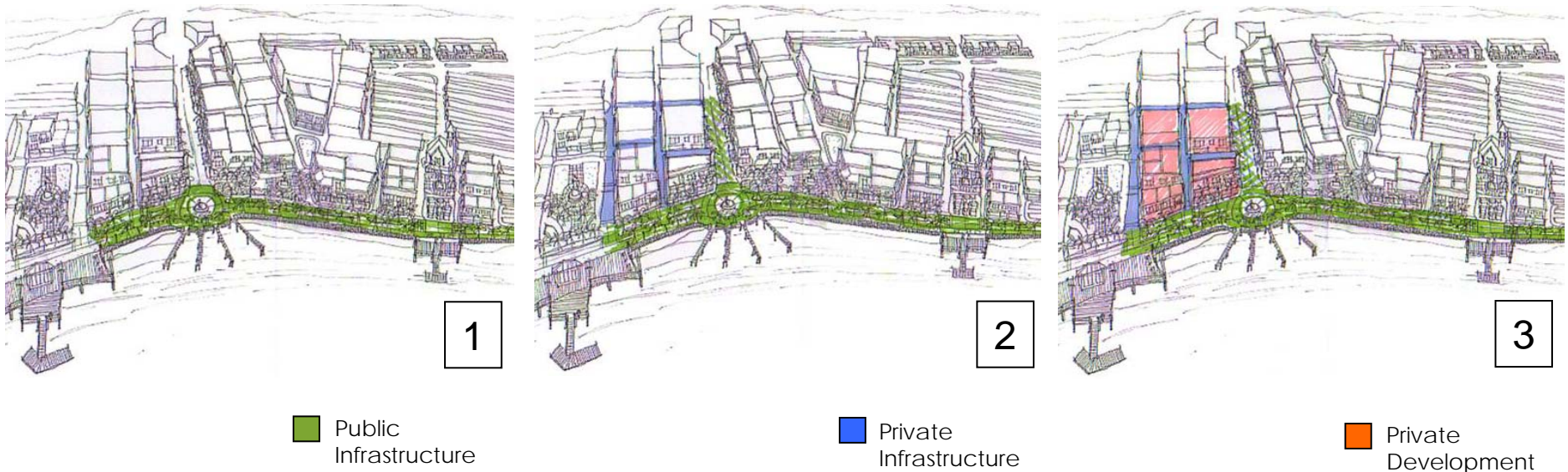
2040 - 2045

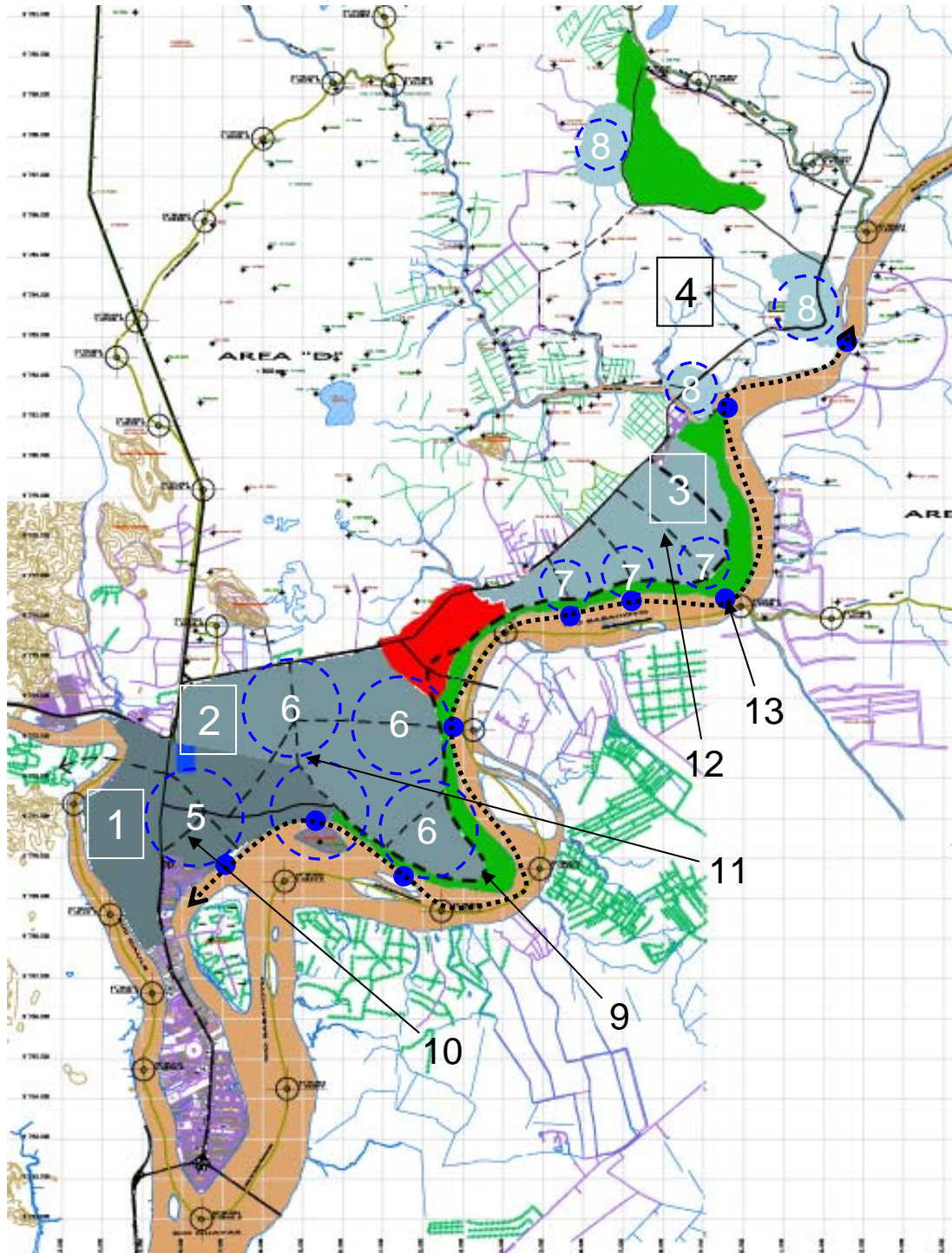


Development of New Town Centers

Town Centers form the core of each new development area. They provide a critical mass of essential urban infrastructure, public spaces, and a mix of uses including commercial services, social services, public market, churches, and an urban residential mix of housing products at moderate densities. A first phase of each Town Center should be established in advance of or in concert with major private residential development and should be timed to coincide with construction of major road connections, particularly the parkway.

This initial development will require investment by both the Canton and the private sector, generally with the Canton providing utility services and the private sector providing street construction coordinated with adjacent private development. Each Town Center will require a public-private partnership agreement outlining the phasing, financing and responsible entity for each element of the town center. The Town Center can vary in plan but should be based on small blocks, maximizing street frontages and pedestrian access. Streets and sidewalks should be public and accessible to all.





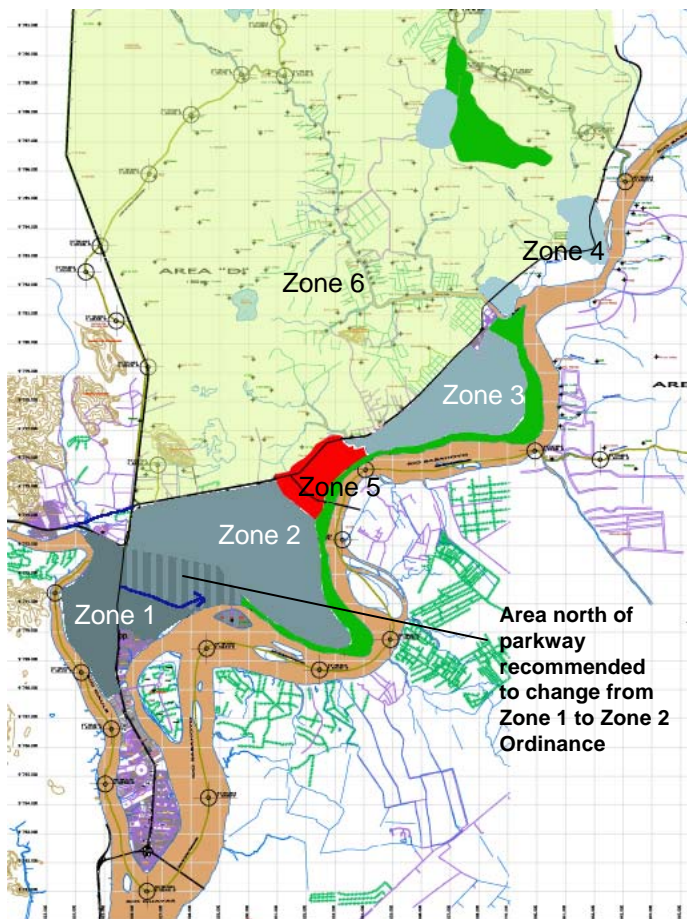
Summary: Canton Growth Framework Plan

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Growth Ordinance Zones

Future growth in the Canton should be regulated by a series of ordinances in each of 6 separate zones. Each ordinance should fit the growth objectives and unique conditions of that zone and each should contain at least the following elements:

- Allowable land uses and densities
- Lot and building coverage sizes and setbacks
- Design and construction standards for elements of the public environment including street dimensions and profiles, and pedestrian zone specifications
- Requirements for public open space set asides



In addition, each of the six zones has unique conditions that should be included in that zone's growth ordinance. These conditions include:

Zone 1: La Puntilla - This is the existing "Urbanization Zone" with an existing Development ordinance. It should be reviewed and amended if necessary to bring it into compliance with the new plan

Zone 2: New Urban Growth Zone - This is the most densely developed zone and requires the most detailed development ordinance. The proposed town center areas should be zoned for mixed uses, intense pedestrian streets and special waterfront design standards where applicable. The town centers should also be structured to receive transfers of development rights from the agricultural zone. (Zone 6)

Zone 3: Traditional New Growth Zone - This zone has similar features to the New Urban Growth Zone but with less densities throughout. Provision should be made to retain agricultural land in selected areas.

Zone 4: Existing Towns Zone - The main feature of the zone is to regulate development to maintain the character of the existing towns in terms of density, scale, building and street typologies and materials.

Zone 5: Office and Light Industrial Zone - This zone should be permitted for a mix of non-residential use to provide flexibility to meet the goal of new jobs in the Canton. Due to the proximity of residential areas to this zone, only non-polluting light industrial uses should be permitted here.

Zone 6: Agricultural Zone - This zone is primarily intended to preserve the agricultural economic base of the Canton and the rural and recintos type of residential settlement. It is therefore a "low growth" zone where other forms of new residential and commercial development should not be permitted and where large minimum residential lot sizes should be established and "cluster" zones should be permitted to accommodate recintos typologies. To compensate landowners for these restrictions, they should be permitted to sell their low density development "rights" to owners in receiving zones where higher densities are permitted.

Appendix

Implementation Case Studies

The following 9 projects in Central and South America address one or more of the issues faced by the Canton of Samborondon. They are briefly presented here with suggestions on finding more detailed information on each



Town Centers - 1

Urban Subcentres for citizen life in the low income areas of Medellin, Colombia

This case study is an example of using an alternative model of management to control population growth and migration. The goal of the public government, administered through local administrations, is the development of an inter-institutional work and investment, with a broad community participation that leads to the consolidation of the Citizen Life Urban Subcentres, reproducing social and urban tissue.



Relevance to Samborondon

As densities of an area increase, the logical next step is to create another major city such as Guayaquil. This case study however, produces smaller subcentres that have the same opportunities with respect to housing, labor, and economics as the major center. These subcentres however do not disrupt the economics of the already established civic center, in our case Guayaquil. The goal is not to draw away from Guayaquil's business and residents, but to produce new towns/centers that can provide the same type of benefits. The key to the subcentres success is decentralization in terms of densities and extending infrastructure, etc throughout the given area. Samborodon is primed to create multiple urban subcenters with its multitude of resources and growing population.



For More Information:

- www.bestpractices.org/cgi-bin/bp98.cgi?cmd=searchresults&a=w
- Pedro Pablo Pelaez B. "Urban Climate in Urban Design: How land use patterns and building types influence the urban comfort."

CASE STUDIES IN LATIN AMERICAN URBANIZATION

Town Center - 2

The Favela- Bairro Project- Rio de Janeiro, Brazil

Case Study Description

Translated to mean from shanty town to neighborhood. Involved the upgrade of infrastructure and transformation of crime ridden squatter settlements into integrated neighborhoods. Seven principles guided this intervention: the adoption of a multi-sectoral approach to the initiative, the creation of an architecture of quality through spaces that promote interaction; the adoption of a relevant scale of project implementation; the need for private sector involvement and citizen buy-in throughout the implementation phase; decentralization of governing /implementing body and again the need to encourage COMMUNITY PARTICIPATION.

In Favela Fernao Cardin, the river running through the settlement was channeled with community and public facilities located along this spine. Facilities included a daycare center and soccer field.

Relevance to Samborondon

Description

- Case study provides strategy for the development of new town centers
- Success of the initiative partly due to the ability to foster social integration through the design of community spaces
- High level of cooperation between local government and citizens

For More Information:

- www.jauregi.arq.br



Transportation; Roads and Transit - 1

Curitiba, Brazil

Case Study Description

- Integrated land use and transit system
- Linear development along the City's major spines zoned in high density
- Express lanes exclusively dedicated to transit buses along the spines
- Transit network structured in hierarchy with respect to bus capacity and bus average speed
- Transit oriented development; bus terminals serving as local activity centers
- Tube stations designed to increase efficiency in the transit system by reducing bus headways
- Mileage based revenue distributed system collected through an institutionalized bank enabling non-competitions after golden routes among the private bus companies

Relevance to Samborondon

Description

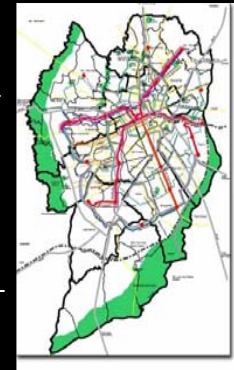
- Heavy congestions on the major highways penetrating through the Canton County
- Existing bus transit system operated by private bus companies
- Safety issues associated with traveling speed because of high competitions among bus companies to load more passengers
- Possibility of connecting the ongoing project to implement transit express lanes in Guayaquil

For More Information:

<http://www.ippuc.org.br>

<http://www.curitiba.pr.gov.br/pmc/ingles/index.html>

http://www.solutions-site.org/cat7_sol110.htm



Transportation; Roads and Transit - 2

Mexico Avenue 2030

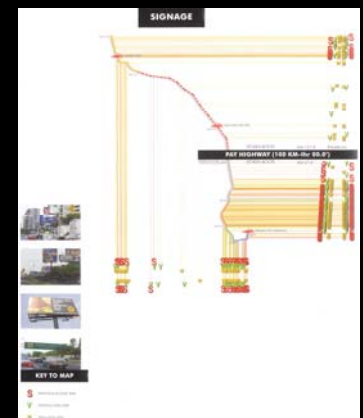
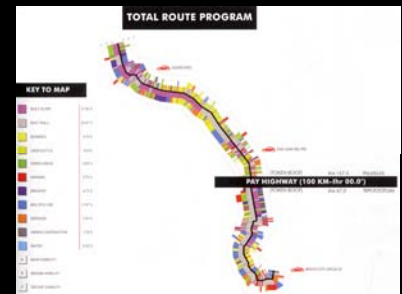
This urban design study was conducted by students at Tec de Monterrey in Mexico City in conjunction with the 2003 International Architecture Biennale in Rotterdam, whose theme "A Room with a View" took an in-depth look at issues of mobility in major metropolises worldwide. The focus of this study was the situation of automobility in Mexico City, where 18.2 million people drive 2.8 million cars. This has resulted in the creation of a vast infrastructure of roads as well as a "culture of the road" reflecting the amount of time spent there by citizens and manifest in signage of all types, the decoration of road and automobile, and the punctuation of roadways by monuments to the culture and history of the area and its inhabitants. This cultural collage of infrastructure and spontaneous expression has developed largely without the input of designers. The aim of the Tec de Monterrey students was to look at the issue of infrastructure as a design task and "...to convert the visualized future into a probable and desirable one."

Relevance to Samborondon

This study may provide insight in relation to the prominence of the "spine" road in determining the growth pattern of La Puntilla and the role that the new bridge and the Perimetra will have in the "Newly Urbanized Zone." There may be the opportunity to influence the design and use of these transportation corridors as they become increasingly important to Samborondon and its surrounding areas.

For More Information:

Houben, Francine, and Luisa Maria Calabrese,
eds. Mobility: A Room With A View.
Rotterdam: NAI Publishers, 2003.



Transportation; Roads and Transit - 3

Transmilenio in Bogotá, Colombia

The Transmilenio bus system, which uses center lanes on major vehicular streets, was established in 1999 as a result of heavy traffic and an unregulated existing bus system. Prior to the Transmilenio private bus systems in Bogotá had confusing and overlapping routes, some had poor ridership numbers, and all contributed mightily to the traffic volume (and added noise and pollution as well).



Relevance to Samborondon

Guayaquil and its satellite towns are facing possible chaos with the many competing bus systems as well, and could benefit from a Transmilenio-like main line and feeder bus systems. As Guayaquil continues its trend towards sprawl, it must confront the same issues as Bogotá relating to public transportation. Connections must be made to satellite towns through the feeder system, and transport within the city through one that uses the main route.

For More Information:

<http://www.transmilenio.gov.co> official site

<http://www.bogota-dc.com/trans/transmil.htm> official site of Bogotá

http://www.clatpu12.com/el_congreso_ingles.htm official site of CLATPU

<http://www.angelfire.com/ny5/transmilenio/indeng.html>

http://www.terra.com.co/actualidad/las_preguntas_de_hoy/20-12-2000?nota13831.html

<http://www.terra.com.co/proyectos/transmilenio>

Development Strategies – 1: Investment Trust Fund

Cuenca, Ecuador City Development Strategy Report

The focus in this case study is an economic strategy to rebuild Cuenca following the economic crisis of the late 90's and early 2000's. The report provides a comprehensive plan for improving economic development at the local level with municipalities required to produce a local development plan as a prerequisite for State transfers. The City Development Strategy (CDS) in Cuenca focused on poverty reduction and economic growth through the framework of a Strategic Investment Plan of \$48M USD.

Development of Investment Trust Fund

- Regional tourism program
- Support to micro-enterprises, small firms, community businesses, and cooperatives
- Support to community based activities
- Cooperative of services for the support of the Jardin Azuayo community
- Promotion of export crops
- Promotion of jobs in environmental services
- Municipal cooperation for low-cost housing

Relevance to Samborondon

The Cuenca Plan can provide local/regional precedent offering a complimentary development plan for Samborondon to the proposed design developments considered in this body of work. The establishment of an Investment Trust Fund could serve as an impetus to garner community involvement and public action for a broader, more comprehensive development strategy for the canton.

For More Information:

United Nations Human Settlements Program

Urban Management Program Division

Report Title: " Cuenca, Ecuador City Development Strategy Report"

<http://www.unhabitat.org/programmes/ump/cds.asp>



Development Strategies – 2: Transferable Development Rights (TDR)

TDR in Curitiba / Brazil

The city of Curitiba in Brazil is a good example of how land use and occupation in the city can be induced, restricted, and organized resulting in successful planning practice. Since 1982, Curitiba adopted the use of Transferable Development rights (TDR) that in Brazil became known as Building Rights Transfer Act. This instrument was used initially to preserve the city's historical, cultural, and architectural heritage and since 1993 it was expanded for the preservation of green areas. The owners of such properties, instead of suffering restrictions on how to use their properties, have the opportunity to transfer (or sell) building rights to other parts of the city, such as high density axes defined by the zoning plan. They can also use the development right to increase the construction area in the same lot.

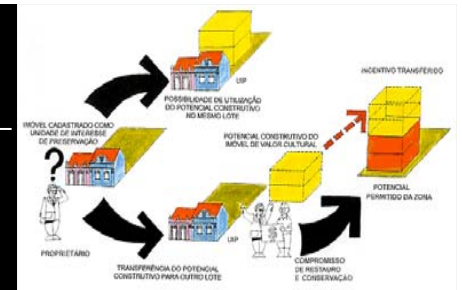
Relevance to Samborondon

Like in Curitiba, land use strategies are a very important tool for every region under the growth management process. In the case of Samborondon, economic outcomes caused by the potential use of land, create local conflicting interests: one that attracts urban development at the cost of vast agricultural lands to the north of the Urban Development Zone, dedicated to rice farming. Balancing the development opportunities and the preservations of agriculture lands can be achievable through TDR programs like the ones above. The difference is that development rights from the agricultural lands can be transferred to TDR receiving areas. Density bonuses through the TDR program can help establish the demand above the mandated zoning restrictions. TDR can thus help achieve compact development and aid infill development in the New Urbanization Zone and the new town centers.

For More Information:

- www.ippuc.org.br (English and Portuguese)
- www.estatutodacidade.com.br/leis/curitiba_transf_indices.dot (Portuguese)
- www.fjp.gov.br/produtos/eg/docs/EC-192.PDF (Portuguese)
- www.curitiba.pr.gov.br/pmc/servicos/legislacao/zoneamento/D0190.2000.doc (Portuguese)

CASE STUDIES IN LATIN AMERICAN URBANIZATION



Planning Process - 1: Demographics and Migration

Patterns of Development on the Metropolitan Fringe

Case Study Description

The article deals with fringe city development in Santiago, Chile. The study was based on examination of the socio-economic composition and structure of urban fringe settlements. The survey was concerned with four main questions: What characterizes the demographic process in these cities, Is it a result of rural-to-urban migration? What are the economic generators of these cities? Do these households produce an economic surplus? Are these developments homogeneous? Of the people surveyed in Santiago, only 1% had resided in the city while 62 have moved from another peri-urban area. None reported living in a rural area. 5% of the households had more than one job. Male employment in construction was dominant. 25% of females were principle income earners. There was an economic surplus but not consistent throughout the studied area.

Relevance to Samborondon

Description

Samborondon's location outside of Guayaquil has characteristics similar the fringe settlements examined outside of Santiago. Samborondon's population is mostly rural (76%) so it is likely that the increase in population will not come from the surrounding agricultural area, but from Guayaquil via La Puntilla. This is supported by Census data that shows a larger growth in the rural areas rather that the urban areas. Male employment, as similar to Santiago, outweighs female employment. A conclusion can be drawn that they are the primary source of household income. Additionally, Samborondon does have an income surplus which will be useful in providing new infrastructure. This data suggests that like Santiago, the growth in Samborondon will come not from the rural area but other peri-urban settlements located around Guayaquil.

For More Information:

Browder, J.O. & Bohland, J.R. (1995 Summer). Patterns of Development on the Metropolitan Fringe.

Journal of the American Planning Association, Vol. 61, Issue 3, pp. 310.

<http://search.epnet.com/direct.asp?an=9508023366&db=aph>



Planning Process - 2: Environmental Policies and Organizations

Municipal Environmental Urban Management

Case Study Description

The Strategic Plan for Rafaela, Argentina outlines a municipality's attempt to initiate an environmental management process in the absence of any environmental urban regulation. With increasing concern for quality of life issues, local development sustainability, and growing contamination, the municipality eventually generated a framework for proposing and implementing resolutions for all community issues, environmental and otherwise. Through the creation of a governing forum the municipality is able to foster community consensus and project sustainability, eliminate "unilateral, isolated, alarmist positions", and elaborate a framework for action and growth on a regional scale.

Relevance to Samborondon

Description

The case study details the manner in which a process for change and growth can be best achieved. By developing a document-able and highly transparent process with a high level of community buy-in the process does not rely heavily on strong personalities or politics for success, an important detail for any long term project in Samborondon. In addition, this case study draws on similar resources to that of the Canton, such as: a variety of public and private initiatives and partnerships, the reproduction of visible results ("wow factors"), and the professed goal of transforming a municipality into a regional player in the country.



For More Information:

www.bestpractices.org Municipal Environmental Urban Management 2000 Submission

Local Contact: CPN Ricardo Miguel Peirone, Mayor Municipalidad de Rafaela Moreno 8 (2300) Rafaela-provincia de Santa Fe Argentina. Tel: 0054 3492-427201 Fax: 0054 3492-426611

E-MAIL: mrafaela@satlink.com E-MAIL: smuda@rafaela.gov.ar



TEAM

Georgia Tech

Faculty

Randal Roark
Ellen Dunham Jones
Michael Gamble

Students

Juan Archila
Kahlillah Dotson
Avanish Pendharkar
Bryan Cates
Rebekah Morrison
Brad Calvert
Ben Huh
Carolina Blengini
Addie Weber
Chris Hauck
Nadeene Owusu-Anti
Carlos Garcia
Heather Cook

UEES

Faculty

Alberto Falquez
Ana Maria Leon

Students

Pablo Maruri
Gabriela Paredes
Ma. de los Angeles Sanchez
Luigi Trivino
Gabriel Costa
Gustavo Escobar
Andrea Maenz
Jennifer Illingworth

Canton

(insert names here)

