

ABSTRACT

Title of Document: PUBLIC / PRIVATE DEVELOPMENT IN SAN
JOSÉ, COSTA RICA

Brian Halley Brodeur, M. Arch / M. Rdev, 2010

Directed By: Professor Matthew J. Bell, School of
Architecture, Planning, & Preservation

This thesis will attempt to redevelop the area surround The Pacific Rail Station, *Estacion Ferrocarril al Pacifico*, in San José, Costa Rica in order to better use the land and create a real place within the historic fabric of the city. Embedded with in this goal is the need to create a unique destination with the centerpiece of development being a national assembly building for Costa Rica.

This will be achieved by exploring the nature of public / private development and how it may be used to create change and development in the developing world. This idea of partnership between the public and private sectors has been used extensively here in the United States, but still has not gained as much ground in the developing world. By examining the realities of design and development a model for this type of development can be established. This directly challenges the current development models in San José.

This new model of development should work to capture the value added by government investment and work to attract private capitol. Together this will work to revitalize a portion of the city that is currently under developed.

PUBLIC / PRIVATE DEVELOPMENT IN SAN JOSÉ, COSTA RICA

By

Brian H Brodeur

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, in partial fulfillment
of the requirements for the degree of
Master of Architecture 2010

Advisory Committee:
Matthew J. Bell, Chair
Luis Diego Quiros, Member
Margaret McFarland, Member
Ralph D. Bennett, Thesis Coordinator

© Copyright by
[Brian H Brodeur]
[2010

Acknowledgements

I would like to thank my thesis committee and Will Reed for their undivided support and assistance during this process. Especially Luis Diego Quiros, for without your incite into San José and the problems and opportunities that exist, this project would have never happen.

Table of Contents

Acknowledgements	ii
Table of Contents	iii
List of Tables	v
List of Illustrations	vi
Chapter 1: Introduction	1
<u>Why San José</u>	1
<u>Statement of the Problem</u>	2
Chapter 2: Public / Private Development	5
<u>The Basics of Public/ Private Development</u>	5
Definition:	5
Key Parts:	5
The Three Basic Types of Public/Private Real Estate Partnerships:	5
The Six Basic Ownership and Investment Scenarios:	6
Brief History in US:	7
Main Advantages and Disadvantages of Public / Private Development Partnerships:	7
The 14 Basic Steps in a Public / Private Partnership:	9
The Role and Responsibilities of the Public Partners:	9
The Flexibility and Creativity of Public / Private Partnerships	10
Structuring Public / Private Finance Plans	10
The Developer Solicitation Process	11
<u>Examples of Public Private Development</u>	11
<i>White Flint Metro Station, North Bethesda, Maryland</i>	11
<i>US Soilders' and Airman's Home, Washington, DC</i>	12
<u>Application in San José</u>	13
Chapter 3: Site Selection	15
<u>Qualities for Consideration</u>	15
<u>Site Guidelines</u>	15
<u>The Pacific Rail Station: Estacion Ferrocarril al Pacifico</u>	17
<u>Site Analysis / Diagrams</u>	20

Chapter 4: Design Considerations	28
<u>Regional Context & Response</u>	28
<u>Historic Preservation</u>	28
<u>Economic Considerations</u>	29
<u>Social / Community Responsibility</u>	29
<u>Mass Transit & Pedestrian Access</u>	30
Chapter 5: Precedent	31
<u>National Harbor</u>	31
<u>City Center, Washington, DC</u>	32
<u>Union Station, St. Louis, Mo.</u>	33
Chapter 6: Program	34
<u>Overall Programmatic Vision</u>	34
<u>Programmatic Elements</u>	34
<u>Program Constraints</u>	37
Chapter 7: Design Strategy	38
<u>The Urban Plan</u>	38
<u>Public Space</u>	47
<u>Building Form</u>	48
Chapter 8: Design Proposal	50
<u>The Urban Plan</u>	50
<u>Phasing Plans</u>	53
<i>Phase One</i>	53
Phase Two & Three	55
<u>Site Uses</u>	59
<u>Public Space</u>	61
<u>Building & Street Types</u>	63
Chapter 9: Conclusion	67
Bibliography	69

List of Tables

Table 2.1 The Three Basic Types of Private / Public Development

Table 2.2 The Flexibility and creativity of Private / Public Partnerships

Table 2.3 Five Part Approach

Table 3.1 Site Area

Table 6.1 Total Development Program

Table 6.2 Construction & Lease Data

Table 8.1 Phase One Development Data

Table 8.2 Phase Two development Data

Table 8.3 Phase Three Development Data

List of Illustrations

Illustration 1.1 City Grid

Illustration 1.2 Site Context Photo

Illustration 1.3 Site Context Photo

Illustration 2.1 The 14 Steps in Public Private Partnerships

Illustration 3.1 Street Façade of Esacion Ferrocrril al Pacifico

Illustration 3.2 Proximity to Historic Core

Illustration 3.3 Existing Site Plan

Illustration 3.4 Site Photo

Illustration 3.5 Site Photo

Illustration 3.6 Urban Connections

Illustration 3.7 Important Axes

Illustration 3.8 Rail Lines as Barrier

Illustration 3.9 Rail Station Connections

Illustration 3.10 Site Connections

Illustration 3.11 Site Zoning

Illustration 3.12 Surrounding Site Uses

Illustration 3.13 Downtown San José: Streets & Places

Illustration 4.1 Possible Rail Connections

Illustration 5.1 Critique of National Harbor

Illustration 7.1 Parti 1

Illustration 7.2 Plan & Section 1

Illustration 7.3 Nolli Plan 1

Illustration 7.4 Images of the Model 1

Illustration 7.5 Parti 2

Illustration 7.6 Plan & Section 2

Illustration 7.7 Nolli Plan 2

Illustration 7.8 Images of the Model 2

Illustration 7.9 Parti 3

Illustration 7.10 Plan & Section 3

Illustration 7.11 Nolli Plan 3

Illustration 7.12 Images of the Model 3

Illustration 7.13 Preliminary Site Plan A

Illustration 7.14 Preliminary Site Plan B

Illustration 7.15 Pacific Station Public Space Study

Illustration 7.16 Typical Development

Illustration 8.1 Site Plan

Illustration 8.2 East – West Site Section

Illustration 8.3 North – South Site Sections

Illustration 8.4 Photographic of the Model

Illustration 8.5 Site Connectivity

Illustration 8.6 Phase One Plan

Illustration 8.7 Phase Two Plan

Illustration 8.8 Phase Three Plan

Illustration 8.9 Land Use

Illustration 8.10 Places at Pacific Station

Illustration 8.11 Nolli Plan

Illustration 8.12 View Looking South

Illustration 8.13 View From the Station Platform

Illustration 8.14 View to the Plaza

Illustration 8.15 Typical Section of Commercial Building

Illustration 8.16 Commercial Building Type

Illustration 8.17 Typical Section of Residential Building

Illustration 8.18 Residential Building Type

Illustration 8.19 Street Sections

Chapter 1: Introduction

Why San José

Cultures build and develop in different ways. In today's global society western values, particularly American ideal of architecture and development have prevailed often at the expense and destruction of local traditions and techniques. According to Ken Yeang many major Asian cities have become so homogeneously internationalized that they have lost many of the characteristics that makes them a unique and indigenous place or even Asian.¹ The same thing can be said about some Latin American cities. Certain American ideas or systems are good and create solid results. But while applied in the same vocabulary or without thought given to local or regional context, they can create great harm.²

San José offers a unique and special opportunity for design and development. As the urban center in a developing nation San José is ready for redevelopment on a large scale. Here development has occurred in the suburban sprawl model leaving the core of the city poised for redevelopment. Master planning projects in the city have started this in the right direction, but no not necessary provide a realistic model for redevelopment and change.³ By utilizing public / private development principles this

¹ Yeang, Ken. *Tropical Urban Regionalism: Building in a South-East Asian City*. Singapore: Concept Media, 1987. Print:8.

² "Planning and Development in San Jose." Personal interview. 15 June 2010.

³ "Planning and Development in San Jose." Personal interview. 15 June 2010.

thesis will propose a model for redevelopment that responds to local and regional issues.

Statement of the Problem

San José is city ready for redevelopment. Following economic growth in the 1970s and 1980 the city's historic core gradually has become a place for commercial and governmental actions while the areas surrounding the city have become the most popular for residents. This exodus has caused a decrease in population from within the urban core. The current population is 346,799 persons while the entire metropolitan area accounts for 2.2 million people, which is about 57 percent of the total national population. It also accounts for 70 percent of the national gross domestic product and 70 percent of the national vehicular fleet.⁴

The city is a place dominated by the car. There are very few options for public transportation. This lack of reliable efficient public transportation exacerbates this problem.⁵ The city has two historic train stations; one that served the Pacific Coast while the other served the Atlantic Coast. From the late 1800s to the mid 1990s the trains served as ways to transport both goods, mostly bananas, and people. At the importance of the automobile rose and more roads were built the trains gradually become obsolete. While this thesis will not explore to the city on an entire context it is still important to outline the larger urban condition.

⁴ Enrolling, By. "Costa Rica." *Welcome to Travel.State.Gov*. Web. 15 Dec. 2010. <http://travel.state.gov/travel/cis_pa_tw/cis/cis_1093.html>.

⁵ "Planning and Development in San Jose." Personal interview. 15 June 2010.

The city also serves as hub for both international business and tourism. Currently over 200 large multinational corporations have offices in or around San José, but their interaction with each other and the city could be improved.⁶ The city also serves as one of two hubs in the country for tourism. Costa Rica has over 50,000 Americans who call Costa Rica home and over 750,000 visit each year.⁷ It is a popular tourism destination for Americans, Canadians, and Western Europeans. While the country as a whole heavily dependent on tourism, the city of San José does not act as a destination, but rather just a connection in and out of the country.

This growth of international business has caused an interest in the city again. Young professionals with relatively high incomes are now looking for urban places to live. The city currently has some areas like this, but further development is needed to meet this need.⁸

The urban fabric that composes the city is complex and has been developed over time. With its historic core a clear and logical grid was established, but over time the grid has become less rigid and works with both the natural topography and has become more suburban in nature. The buildings that make up the city itself are of great variety in both terms of scale, style, and, quality. Since San José was not a colonial Spanish city it does not have the architectural or urban history to build upon.⁹

⁶ Deloitte & Touche, S.A., ed. *Doing Business in Costa Rica*. Rep. 2009. Print.

⁷ "Costa Rica." *U.S. Department of State*. Web. 15 Dec. 2010.
<<http://www.state.gov/r/pa/ei/bgn/2019.htm>>.

⁸ "Planning and Development in San Jose." Personal interview. 15 June 2010.

⁹ Almandoz, Marte Arturo. "Chapter 10." *Planning Latin America's Capital Cities, 1850-1950*. London: Routledge, 2002. Print: 242

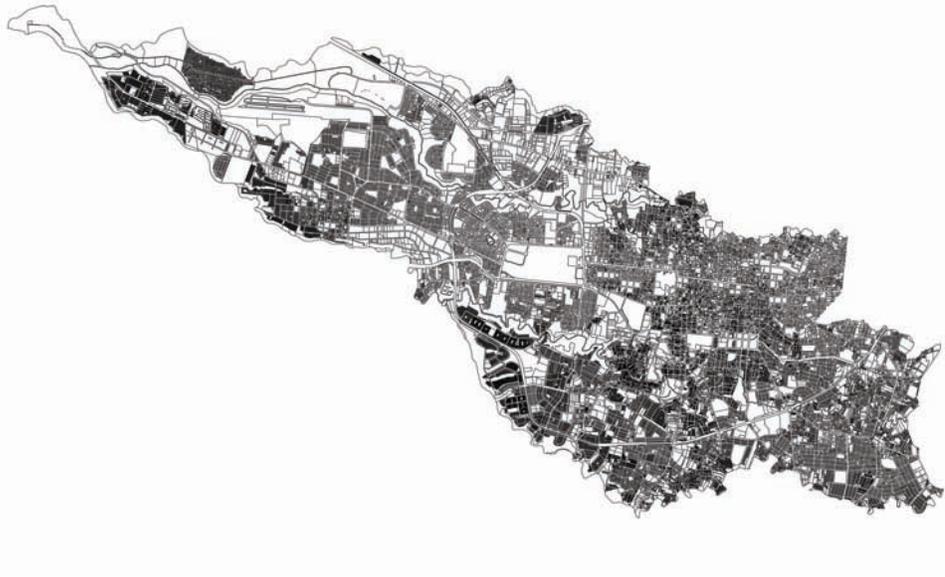


Illustration 1.1 City Grid



Illustration 1.2 Site Context



Illustration 1.3 Site Context

Chapter 2: Public / Private Development

The Basics of Public/ Private Development

Synopsis of:

Public/Private Finance and Development:

Methodology, Deal Structuring, & Developer Solicitation

John Stainback

Copyright 2000 by John Wiley & Sons, Inc.

Definition:

“The close collaboration of a public entity(s) and a private entity, or team, to structure, negotiate and implement the finance, design development, construction and operation of buildings(s).”

Key Parts:

“It is not necessarily finding middle ground, but typically finding new ways to solve different problems.”

The level of risk and responsibility of all parties involved needs to be taken into account.

The Three Basic Types of Public/Private Real Estate Partnerships:

Table 2.1 The Three Basic Types of Public/Private Real Estate Partnerships (Source: Stainback)

The Six Basic Ownership and Investment Scenarios:

1. Public Partner as Sole Owner
 - a. Public Partner is sole owner and incurs all risk and ownership & controls much of the predevelopment and planning of the project.
 - b. Private Developer completes the project for a fee
 - c. Typical financing includes bonds issues by public partner or secured by the public partner's balance sheet and credit rating.
2. Public Partner as Sole Owner, but Outsources Design, Development, and Operation
 - a. Public Partner is sole owner, secures financing, but out sources the design, development, and operation of the facility
 - b. Private Developer once again handles construction and runs the property for fee
3. Public Partner as Controlling Interest in Partnership
 - a. Both parties share the burden of structuring and obtaining financing for the building.
 - b. The Public Partner holds over 51% of the financing.
 - c. The Private Developer takes on most of the traditional responsibilities of a developer.
4. Nonprofit as Owner
 - a. A Nonprofit is formed by the partnership to serve as the owner.
 - b. Formation of this is to help reduce the cost of financing and to incur the risks and responsibilities of the ownership and operation of the facility.
 - c. The Nonprofit is directly tied to the Public Partner.
5. Private Partner Bears Risk Burden
 - a. Private Partner is primary owner and incurs most of the risks, responsibilities, and costs.
 - b. Public Partner provides some combination of capital and noncapital investments and/or credit enhancements.
 - c. Public Partner often provides the land.
 - d. Private Partner obtains private equity and debt then leases the facility to the Public Partner for a given period of time. At the end of the lease term the public partner owns the facility or purchases it.
 - e. Either party can operate the facility.
6. Private Developer as All-Encompassing Partner
 - a. Private Partner is the owner, developer, and operator.
 - b. Public Partner as a passive investor with little or no risks and responsibilities.
 - c. Public Partner incurs little or no risk and responsibilities and thus little to no economic return.

Brief History in US:

- 1973 – Congress passed the establishment of the Pennsylvania Avenue Development Corporation to develop Penn. Ave. between The White House and The Capital Building. The land leases covered the nearly \$2.5 billion cost to redeployment and design the distinct.
- In the US the estimated annual volume of construction financed in this way
- exceeds \$50 billion.
-
- Reasons for this increase:
 - Change in Population
 - Increased costs of social programs has resulted in less funds for capital improvements
 - Capital Markets Comfortable working with Public Partners
 - Currently lack of private financing and availability of public financing
 - Public entities lack the resources and knowledge to develop project

Main Advantages and Disadvantages of Public / Private Development Partnerships:

- Advantages from the perspective of the Public Partner
 - Facilitated action by both the public and private partners to proceed with a project.
 - Reduced ownership, development, and operation risks
 - Generating nontax income or private financing of a needed public facility
 - Monetizing excess or under-performing government-owned real estate assets.
 - Optimizing private equity and debt financing, reducing the investment required from the public partner
 - Eliminating or reducing government-issues debt, thereby saving debt capacity for essential services or facilities
 - Fully Utilizing private partner expertise and creativity in finance, design, development, and facility management
 - Generating long-term commitment by the investor(s) and/or operator through private investment
 - Generating Tax revenue form land and/or a project that would not proceed without a public / private partnership
 - Completing the partnership process and forcing the project to be market driven and financially feasible to build

- Disadvantages from the perspective of the Public Partner
 - Reducing the level or control over the design, delivery, and building quality, as well as the use of the facility in some instances
 - Reliance on the competitively selected developer to obtain all or a portion of the financing, manages the construction, and successfully operate the facility.
 - Possibility of structuring a partnership that is not fair sharing costs, risks, responsibilities, and economic return
 - Private ownership entity often has the right to sell the project to a third party unknown to the public
 - Economic return to the public partner for capital and noncapital investment(s) is often highly dependent on the performance of the private partner ownership and facility management entities
 - Predevelopment process can be placed under a microscope by the media, administration, and others
 - Any private partner has the right to protest the developer selection process
 - Selection of a private developer based in a city or state other than the public partner can be contentious

- Advantages from the perspective of the Private Partner
 - Most public / private development are high-profile civic-oriented projects that can enhance the image of the selected developer if the project is successful
 - Government-owned real estate assets that have never been available in the commercial market are available for development for the first time
 - Many public/ private development partnerships include the long-term lease of a development site that eliminates the initial cost of land acquisition
 - Government and university entities often share project costs with the developer, thereby reducing the private partnership investment
 - Government and university entities have the capability of enhancing cash flow if the pro forma indicates a shortfall
 - A good public partner will develop a consensus among the government participants and voters for the project that facilitates action by the private partner
 - Government entities have the power to streamline the design, construction, and operations approval processes
 - Government and university entities often share the risks and responsibilities of public / private development, thereby reducing the risks and responsibilities of the developer
 - Public / private partnerships also reduce investment risks

- Disadvantages from the perspective of the Private Partner

- The Private Partner must abide by the requirements of the RFQ/RFP process and the negotiation process
- The traditional process used by a private developer to finance, design, and develop a typical project is significantly different than the process required to structure and implement a public / private partnership
- The public / private development process can require significantly more time
- A consensus to proceed with the project is essential
- Political Stability is another important ingredient
- Public partner expectations must be in sync with the local market
- To achieve some projects, new legislation must be prepared and approved

The 14 Basic Steps in a Public / Private Partnership:

Illustration 2.1 Public/Private Finance and Development Process (Source Stainback)

The Role and Responsibilities of the Public Partners:

1. Governmental Issues:

- Determine the need for the public facility and/or the commercial developments
 - Develop a consensus among governmental officials and/or residents or key merchants that the project is needed.
 - Conceptualize the project
 - Establish guiding principles
 - Identify potential sources of funding
 - Identify basic techniques to realize the project
 - Begin to identify the regulatory constraints and opportunities
2. Project Team:
 - Identify and assign a project manager
 - Hire the right consultants at the right time
 - Establish the consulting team
 3. Projects Process:
 4. Developer Solicitation Process:
 5. Deal Structuring and Negotiations:

The Flexibility and Creativity of Public / Private Partnerships

Table 2.2 The Three Basic Types of Private / Public Real Estate Partnerships

Structuring Public / Private Finance Plans

Table 2.3 Five-Part Approach

The Developer Solicitation Process

- Approach One: The three-step RFI/RFQ/RFP Process
- Approach Two: The Two-step RFI/RFQ/RFP Process
- Approach Three: The Single step RFP Process
- Approach Four: The prequalified developer RFP Process
- Approach Five: The sole-Source developer method
- Approach Six: The RFQ/negotiate method¹⁰

Examples of Public Private Development

White Flint Metro Station, North Bethesda, Maryland

White Flint Metro Station is a mixed-use transit-oriented development public/private development located about 5 miles north of Washington, DC. The primary public partner is Washington Metro Area Transit Authority. The primary private partner is LCOR, Inc.

¹⁰ Stainback, John. *Public/private Finance and Development: Methodology, Deal Structuring, Developer Solicitation*. New York: Wiley, 2000. Print.

The site is a total of 31.4 acres with 2,800,00 square feet of total development. This project will have an even split between commercial and residential uses. The project was also planned as high density with ample open public space. The project includes a commercial main street, 1500 structured parking spots, ten bus bays, 1,000,000 square feet of office space, and four mid-rise residential buildings with a total of 1,300 units. The projected total cost is 350 to 400 million dollars. There was no special legislation passed for the project and it was financed through conventional debt and equity sources. No other incentives were given to the private developer. The project's projected time line was 8 to 10 years.¹¹

US Soldiers' and Airman's Home, Washington, DC

The U.S. Soldiers' and Airman's Home is a redevelopment of 130 acres of federally owned land in northwest Washington, DC. The project is broken down by different product types. The site is to include: office, retail, restaurant, hotel, golf course, and historic redevelopment. The two public partners are the United States Soldiers' and Airmen's Home and the Armed Forces Retirement Board. The primary private partner is LCOR, Inc.

The total build out is planned over 35 years. The build out includes: 650,000 square feet of office / medical, 615,000 square feet called the University Village, 280,000 square feet of senior housing, 140,000 square feet of student housing, 225 hotel rooms, 10,000 square feet of retail, over 4,000 parking spots, and 6.3 acres of open public space.

¹¹ Stainback: 177-180

The project presented two main challenges to the development team. The first challenge was to determine the value of the land. This was difficult because it has been under federal control for over 150 years and it is located in a challenging neighborhood. The second main challenge was to come up with a realistic plan that could be implemented, yet was still flexible. Under the terms of the agreement LCOR, Inc. was to have a ground lease on the land. After the given time the ownership of the land and all improvements would revert back to the owner.

It was also written into the lease that USSAH had the right to review and comment on design plans. Each portion of the plan is managed separately. This allows for the most economically attractive assets to benefit from lowest market rates. There were four proposed finance structures:

1. Taxable real estate/project financing for the office, retail, and hotel assets.
2. Taxable lease financing for the federal office buildings and embassy facilities.
3. Taxable developer financing for the single-family and multifamily residential housing and the golf course.
4. Tax-exempt revenue bond financing for the University Village, student housing, residential housing, and Continuing Care Retirement Community.¹²

Application in San José

Currently public / private development does not exist in Costa Rica, even though the laws do exist to allow this. The main challenge is the gaining of support within the city government. Usually municipal officials are only concerned with development that will get them reelected, not development that will take fifteen to

¹² Stainback: 164-178

twenty years.¹³ Only after a design and development costs are explored can solutions for application be explored.

¹³ "Planning and Development in San Jose." Personal interview. 15 June 2010.

Chapter 3: Site Selection

Qualities for Consideration

In selecting Costa Rica and more particularly San José certain criteria were established for picking a site. The city of San José has a rich and diverse urban fabric that is based upon the grid, but takes into account natural topography and features. This creates largely uniform blocks. Within this context certain areas of the city have larger blocks with more irregular shapes and of a variety of size. This is the first criterion of picking a site. The site must be large enough to a program with transformative qualities. This requirement alone limited the number of potential sites within the city.

The second main quality was that the site needed to be owned or associated with the city, regional, or national government. This is important for the government to be able to be a partner in the development of this site. This allows the government to have greater control within the project.

Site Guidelines

In preparing to select a site a list of factors or constraints were established into better guide the site selection process. The first of which was the need for the site to be large enough to be transformative in nature and support a diverse program that would create a center of nucleus for development. This requirement for a substantial site greatly reduced the number of possibilities within the city. The site could be

comprised of multiple lots or owners, but if the land was of limited ownership the project would be more simple and easier to structure.

The second main, and arguably the most important factor, was that the land should be owned by some branch or level of the city or national government. This requirement will allow for the city or local government to be local partners in the development of the site. This land holding coupled with regulatory powers are the state's ingredients in this development.

The overall location of the site within the fabric of the city is also important. The site should be near the historic core of the city and thus be surrounded by neighborhoods or a population that can and will support change. At the same time the site should be able to support redevelopment. The site's location within the city should also reflect some tie to the natural aspects of the location, whether it be near open green space or underutilized natural areas. This is important to tie the development to one of the main drivers of the Costa Rican economy, eco-tourism.

The site's potential to be tied to present and future mass transit systems are also important. With the city's current dependence on automobiles and underdeveloped mass transit it is important to find a site with this potential. Any development that is created should reflect this change in thinking from automobiles to mass transit or pedestrian friendly areas. The city currently has plans calling for the improvement of mass transit and pedestrian access. The site should be selected to strengthen this.

The Pacific Rail Station: Estacion Ferrocarril al Pacifico



Illustration 3.1 Street Façade of Estacion Ferrocarril al Pacifico

The Pacific Station, *Estacion Ferrocarril al Pacifico* is a site that meets these guidelines. The site itself is located south of the historic city center of San José (See Illustration 3.2). The site is a “super block” that is composed of twenty-two individual parcels. In total the government owns four of these parcels. These represent approximately seventy-five percent of the total land area. The site has a total land area of 124 acres and is zoned institutional, mixed-use, and park/recreation (See Table 3.1). The land is located above the flood plane and not in the mudslide zones.

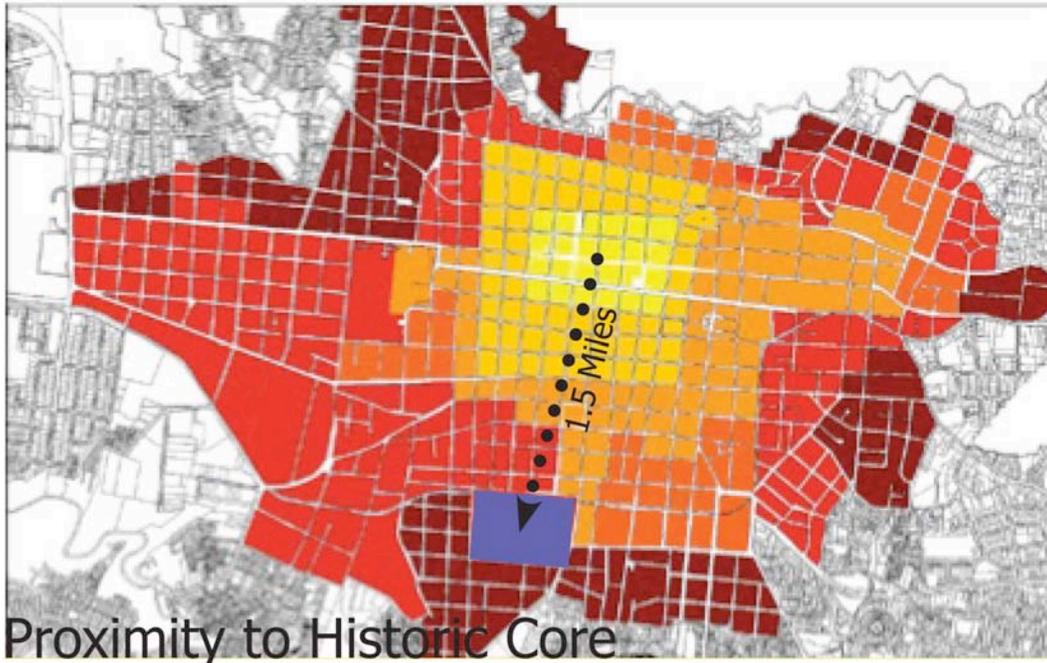


Illustration 3.2 Proximity to The Historic Core

Area	SF	Acres	% of total site
Total Site Area			
Privately Owned	147,735	3.39	12%
Government Owned - Train Function	926,794	21.28	75%
Government Owned - Open Space	69,341	1.59	6%
Road Right of Way	16,566	0.38	1%
Historic Train Depot Area	18,535	0.43	2%
Rail Road Right of Way	50,440	1.16	4%
Total Site Area	1,229,411	28.22	100%

Table 3.1 Site Area

The site is home of the Pacific rail station. This station was originally built to serve the expanding banana trade and expansion to the Pacific Coast. The first train left the station on July 23, 1910. By 1930 the train was converted over to electricity. The trains were used up until 1995. At that time all bananas were moved via truck.

Currently only one tourist operates out of the station. This train runs twice a day and runs 91 km to Caldera at the coast.¹⁴

The majority of the site is filled with rail lines and a train shed. These lines run along the northern edge of the site and are serviced by a station located on the northeast corner of the site. This station dates from the mid 1930's.



Illustration 3.3 Existing Site Plan Figure



Illustration 3.4 Site Photograph



Illustration 3.5 Site Photograph

¹⁴ "Costa Rica Trains - Green Limon and City." *Central America Tourism Operator*. Web. 15 Dec. 2010. <<http://www.vacationcity.com/costa-rica/information/history/trains/>>.

The site also offers possible connections to the natural ecosystem and open green space. Just across the street from the historic rail station is a park. This urban park is one block large. About four blocks south of the site is the Rio Maria Aguilar. This stream valley provides the natural boundary of the grid of that has been extended from the historic city core. According to the Harvard GSD study of the city this stream valley is under utilized and developed.¹⁵ Possible connections to this natural amenity may exist. This could serve to highlight the ecotourism as an important aspect of the Costa Rican economy.

Site Analysis / Diagrams

The Pacific Station site is a location that offers many possibilities for redevelopment and also contains certain features that will impact the overall design and development. The site is situated about 1.5 miles south of the historic downtown core (See Illustration3.2). The diagram below shows the connection to downtown with the major buildings and public space shown.

¹⁵ Garbe / Harvard GDS, Raymond, comp. *Urban Revitalization in San Jose, Costa Rica*. Web. 15 Dec. 2010.



Illustration 3.6 Urban Connections

This location is enhanced with the strong north south axis that runs from the National Cathedral in the North to the Station Building in the south. Another strong axis is the east west connection to the large park east of the site.



Illustration 3.7 Important Axes

The existing condition of the site is also a major component of the overall developmental possibilities here. The existing train tracks run east west along the northern boundary of the site. The location of the tracks is a physical barrier to development along this edge and will affect the ability to bring people in along this edge of the site (see Illustration3.8)

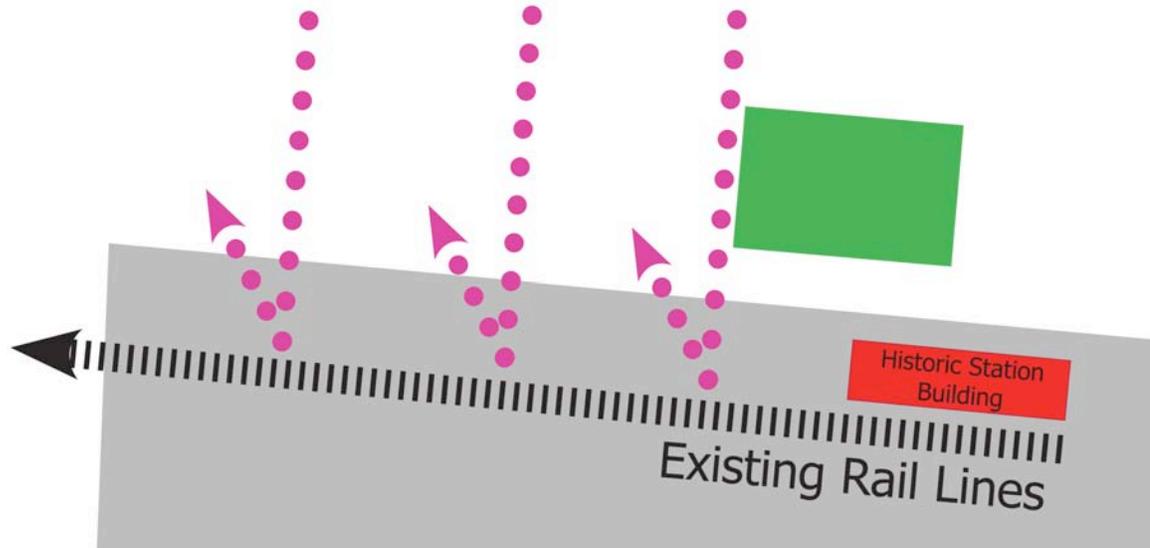
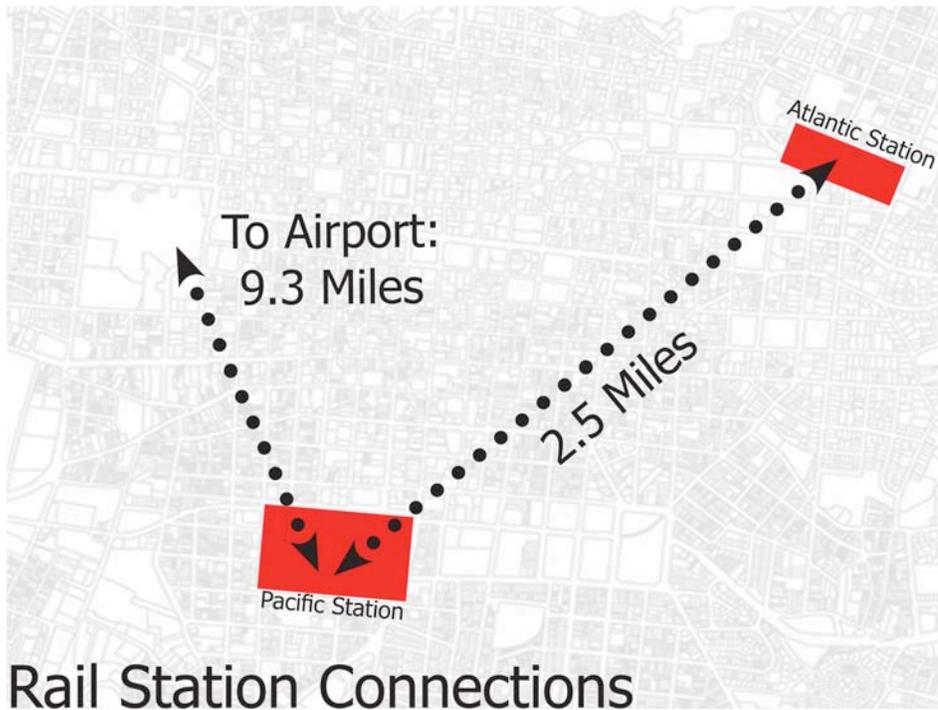


Illustration 3.8 Rail Lines as Barrier

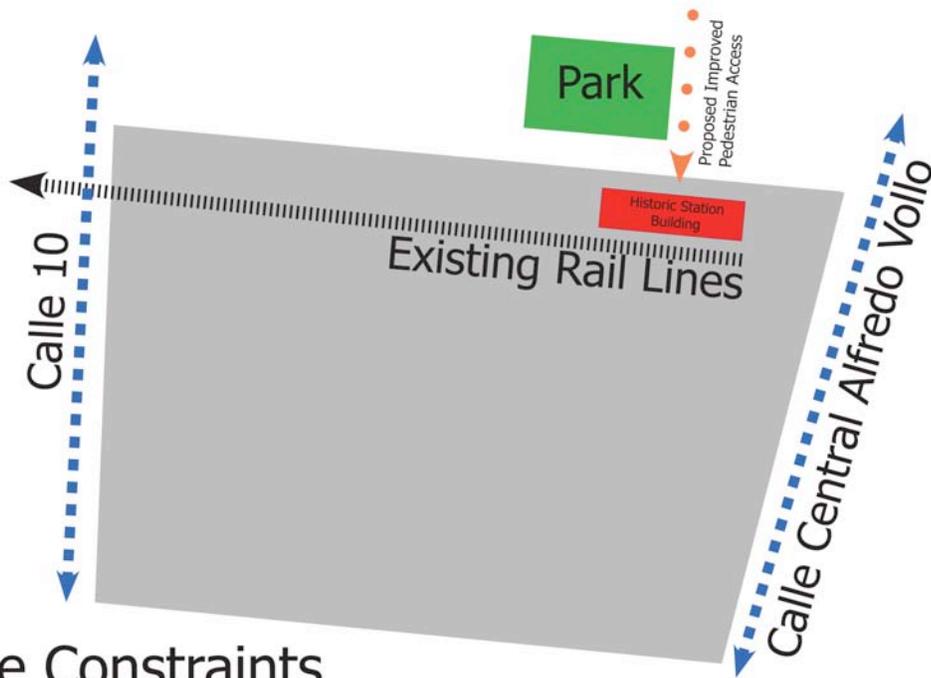
The site also offers the potential to connections to other mass transit or citywide services. The site is located just over 9 miles from the airport and 2.5 miles from the Atlantic Rail Station.



Rail Station Connections

Illustration 3.9 Rail Station Connections

The site's boundary on the east and west are created by Calle 10 and Calle Central Alfredo Vollo, respectively. The historic station building site at the terminus the axis that connects the site to the historic downtown. A one block public park sits along this axis.



Site Constraints

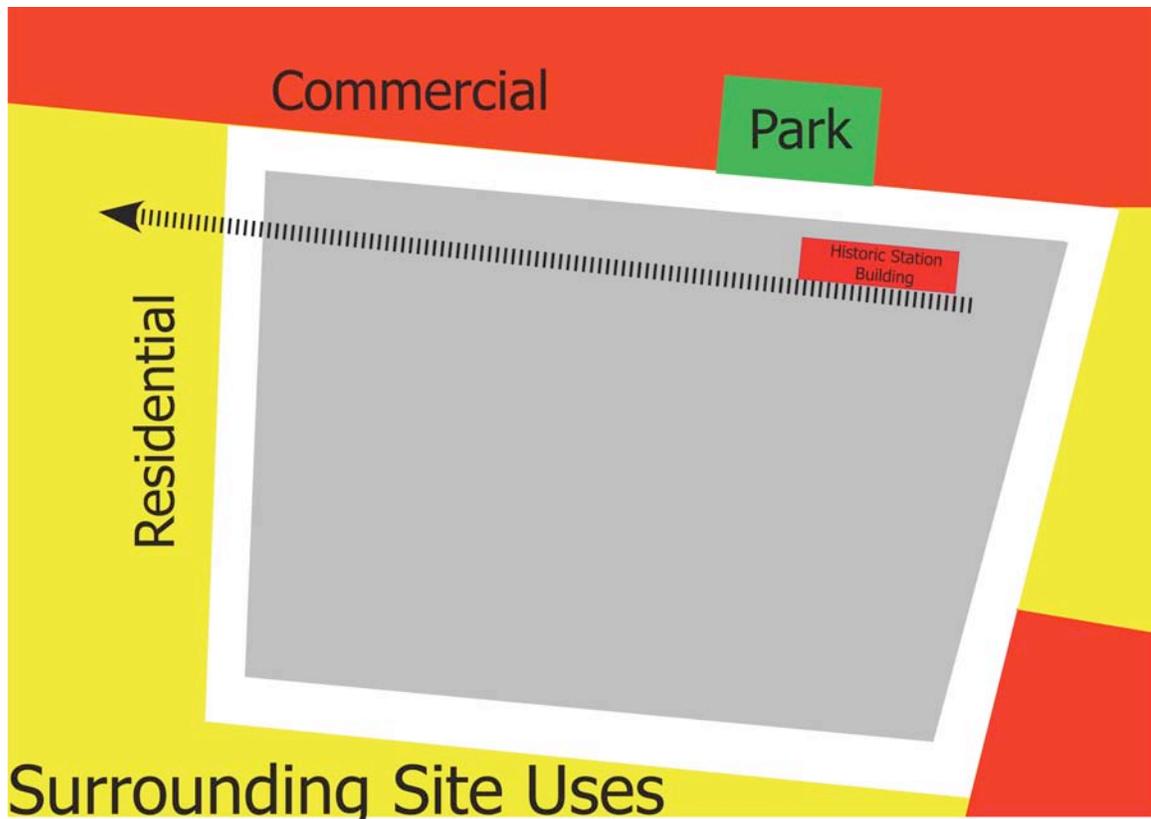
Illustration 3.10 Site Constraints

The majority of the site is zoned institutional. Smaller parcels in the south are zoned commercial and there is one lot that is zoned public open space.



Illustration 3.11 Site Ownership / Zoning

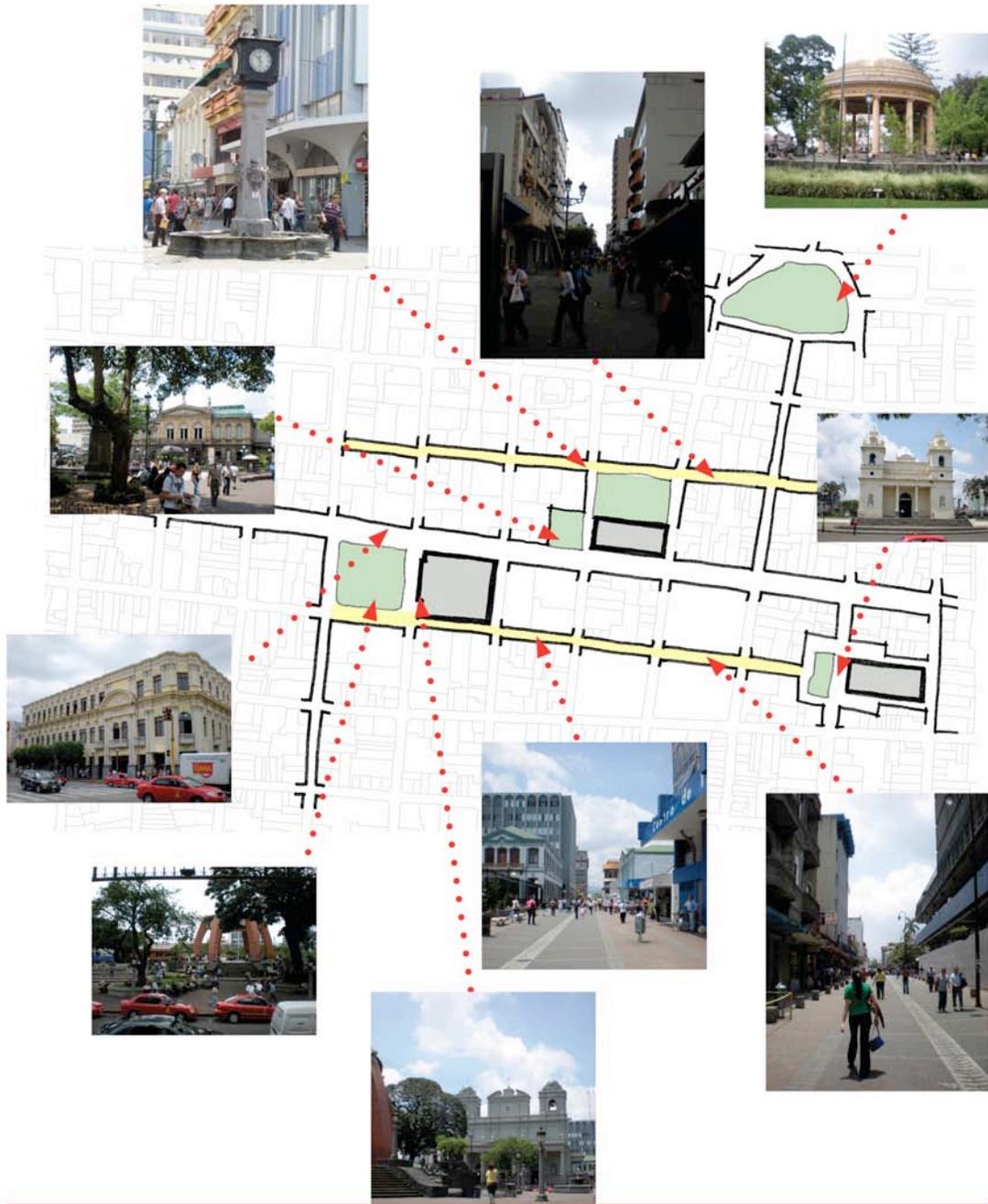
Both commercial and residential zones surround the site. Along the north is a commercial zone. On the West, South, and East sides of the site the land is zoned as residential. On the East side there is a strip that is zoned commercial that runs along the main road that borders the site.



Surrounding Site Uses

Illustration 3.12 Surrounding Site Uses

Downtown San José has an established network of public parks / plazas that create space in front of major public buildings. These open spaces are boarded by both streets with the highest vehicular movement and pedestrian streets. The following diagram highlights this. The major streets are denoted and the pedestrian streets are shown in yellow (see Illustration3.13).



Downtown San José streets & places

Illustration 3.13 Downtown San José: Streets & Places

Chapter 4: Design Considerations

Regional Context & Response

In selecting a site outside the United States it is important to keep in mind that what works there does not work in other areas of the country or world. Certain design and development guidelines and standards may work in the United States, but may not be correct for San José. Responses to economic, cultural, climatic, and social factors need to be questioned and researched in order to create a development that is appropriate for the area. Assumptions held by the author should be questioned so that the project is the correct response for given constraints.

The over all urban context of the city should be examined to determine how the new development should impact the urban fabric of the city. The overall aesthetics and response should not be “American,” but rather reflect what is appropriate in Costa Rica.

Historic Preservation

The selection of the site mandates an opinion or response to the historic nature of the site and buildings. It should be investigated if any of the buildings are historically significant and should address them in a way that is both approaches to the physical and social frameworks present on the site. The only historically significant building is the station building located on the northeast corner of the site.

Economic Considerations

This thesis will focus equal attention to the physical design and economic development of the proposed project. All aspects of the design must be reflected within the proforma of the project. This means that current and future economic conditions need to be taken into account at all times. The process for the design should be iterative and exhibit the back and forth nature of design and development.

In a September 2010 report Deloitte & Touche, S.A. reports the Costa Rican economic outlook to be “cautious optimism.” The report looks at feedback given by 176 senior executives of companies employing 41,030 people within Costa Rica.¹⁶ This would seem to indicate that the time is right to invest in Costa Rica.

Social / Community Responsibility

The overall development should place equal importance to both a creation of a place that creates economic growth and one that reflects the people and communities currently existing in San José. While certain programmatic elements may serve different aspects of the economic base the overall design and development of the project should be for the people of the city and show the importance of the revitalization the city.

¹⁶ Deloitte & Touche, S.A., ed. *Doing Business in Costa Rica*. Rep. 2009. Print.

Mass Transit & Pedestrian Access

This thesis project should place importance on mass transit and the pedestrian experience. By utilizing existing and future mass transit systems the importance of automobile should be mitigated. This is in direct response to one of the major problems The Harvard GSD urban study highlighted.¹⁷ Pedestrian access within and to the site should be taken into account. Coupled with improved mass transit options San José can become a more livable, walk able city that reflects the importance of eco-tourism that currently holds in the economy.

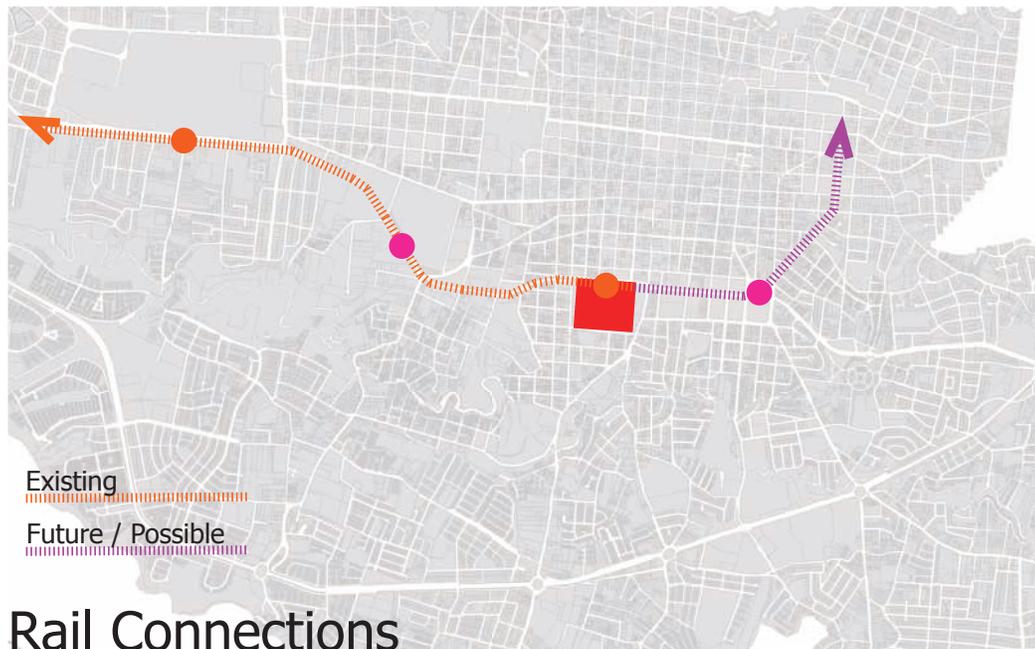


Illustration 4.1 Possible Rail Connections

¹⁷ Garbe / Harvard GDS, Raymond, comp. *Urban Revitalization in San Jose, Costa Rica*. Web. 15 Dec. 2010.

Chapter 5: Precedent

National Harbor

Opened in 2009 National Harbor and the Gaylord National opened to the public. The total site is just over 300 acres on the Potomac River just outside of Washington, DC. A total of 7,300,00 square feet of building is proposed. Comprising that number are 4,000 hotel rooms, 470,000 square foot convention center, 2,500 residential units, 500,000 square feet of class “A” office space, and 10,000 parking spots.¹⁸

This project provides precedent representing a large-scale development. The total site area and square footage too much larger than will fit on The Pacific Station site, but the mix of uses provides a place of comparable size. A major problem or concern that members of the community see with the development is that it is not intergraded well with the existing urban fabric. The site had the potential to better connect into the surrounding community, but the final design did not achieve this.

¹⁸ *National Harbor*. Web. 15 Dec. 2010. <<http://www.nationalharbor.com/intro.htm>>.

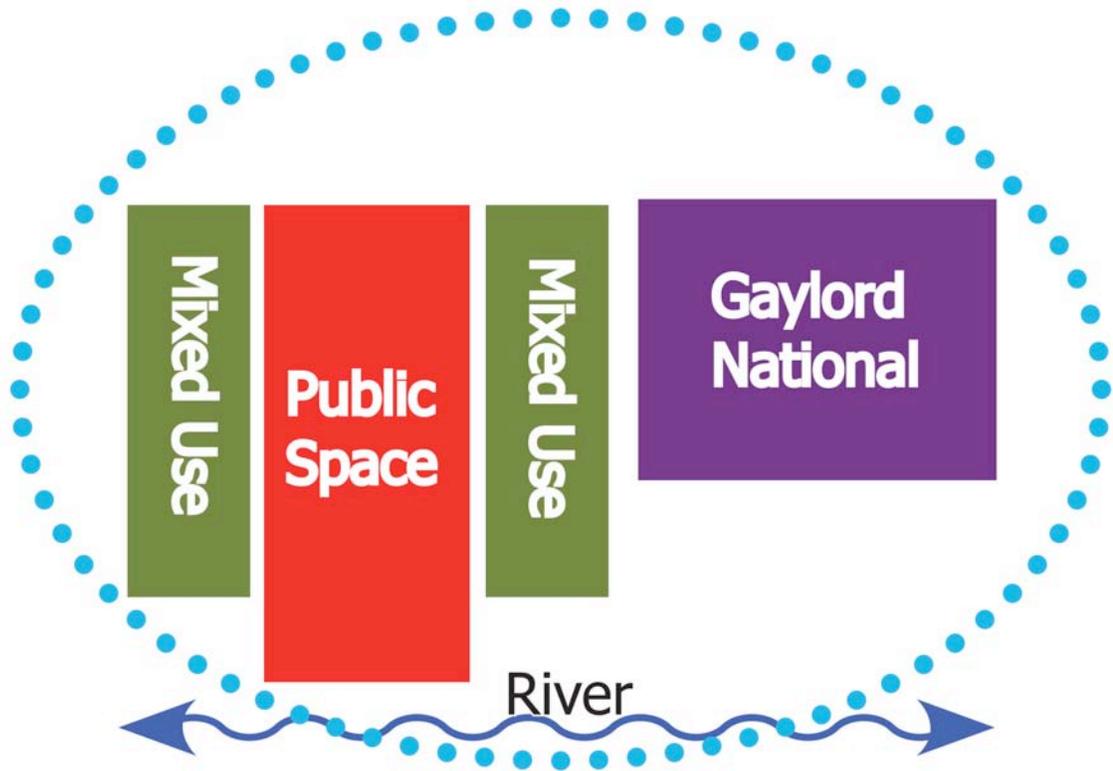


Illustration 5.1 Critique of National Harbor: Site Uses at National Harbor. Dotted line indicates how program is isolated from surrounding context.

City Center, Washington, DC

Slated for development in downtown Washington DC City Center DC is just ten acres in size. The program calls for 2,500,000 of total development. It consists of 360,000 square feet of retail space, 786,000 square feet of residential (674 total units), 275,000 square feet of hotel, and 520,000 square feet of office buildings. This project represents what could be a node of center of a new development.¹⁹

The program provides an example of a large-scale urban infill project in a world capitol. This site is smaller than the site given in the project, but its density is higher than what currently exists in San José today. This project also represents

¹⁹ *CityCenterDC*. Web. 15 Dec. 2010. <<http://www.citycenterdc.com/>>.

development that is meant to serve the surrounding land uses. It also takes into account the existing urban conditions.

Union Station, St. Louis, Mo

Originally Built in 1894 Union Station in St. Louis was once the world's largest and most busy rail station, with up to 100,000 passengers passing through daily. After decades of decline in rail ridership and a shift to other stations the building went into disrepair. In 1985 it underwent a 150 million dollar renovation. This includes the rehab and expansion to the existing hotel, for a total of 539 rooms, and the addition of restaurants and retail space in the old train sheds.

The project used federal historic re-hab tax credits. Currently the station does not operate any commuter trains, but operates dinner trains on Saturday and Sundays.²⁰

²⁰ *Welcome to St. Louis Union Station*. Web. 15 Dec. 2010.
<<http://www.stlouisunionstation.com/>>.

Chapter 6: Program

Overall Programmatic Vision

The first over all program of the site is that of a mixed-use development that will serve as a center for the surrounding neighborhoods in San José. This center will seek to solve issues that are present today. One such issue is the want or desire that people want to live in the city core; in more urban developments. In meeting this programmatic goal a place that responds correctly to the needs of current and future residents. The other main programmatic goal or vision is that site activities will support or enhance San José 's involvement in both tourism / ecotourism and international business.

At the center of the project will be a new national Assembly Building for the county of Costa Rica. This element will help create a reason for the development and create a sizeable government investment. The other site uses will be chosen for their ability to help generate a place and for economic gains. This will assist in establishing Pacific Station as a place.

Programmatic Elements

The site will have a large range or mix of uses. They site will support housing for residents and visitors alike. Both for sale housing and hotels will be constructed on the site. The site will also have a vibrant shopping and entertainment mix of uses. This may include retail, restaurants, and movie theatre. The mix of the hotel, office,

and government presence will help integrate the strong international business and tourism sectors of the economy. The existing use of the train and train station should be continued, if not expanded. The site once was a hub for travelers and goods heading to the Pacific Coast. This service can be brought back to better serve the communities west of the city, and the ecotourism visitors.

With changes in the health care system in the United States and the rising cost of health care around the world there has also been a rise in medical tourism. In 2007 750,000 patients from The United States went abroad for medical tourism. In 2008, with the world economic crises that number dipped to 540,000 or a net loss of about ten percent. In 2009, the number rebounded with 648,000 or an increase of twenty percent of patients going abroad and the numbers are expected to rise even more drastically with an expect rise of thirty-five percent in 2010 continuing into 2011 and 2012. This brings the 2012 figure to 1,621,000 patients. Currently only one site in all of central America (one of only six south of the American boarder) is approved for medical tourism by Patients Beyond Borders.²¹ This site is located in San José, about three blocks north of The Pacific Station site. When Costa Rica's relative location to The United States is combined with these figures it would appear that medical tourism or medical office is a viable or under valued product type in the San José and larger Costa Rican Market. The overall program is as follows:

²¹ Deloitte & Touche, S.A. *Medical Tourism: Update and Implications*. Rep. 2009. Print.

Building Program Component	GSF	Units
Government Civic Center	118,360	
<i>Parking Government Office</i>	2.0	Per 1000sf
<i>Parking Gov't Office Required</i>	237	
Government Office Space	241,637	
<i>Parking Government Office</i>	2.0	per 1000sf
<i>Parking Gov't Office Required</i>	483	
Retail	120,705	
<i>Parking Retail</i>	2.0	per 1000sf
<i>Parking Retail Required</i>	241	
Residential	389	total units
Residential Square Feet	699,733	@ 1,800gsf
For Sale	194	50%
Rental	194	50%
<i>Parking Residential</i>		
<i>For Sale</i>	1.0	per unit
<i>Rental</i>	1.0	per unit
<i>For Sale</i>	194	Spaces
<i>Rental</i>	194	Spaces
Medical Office	119,436	
<i>Parking Office</i>	0.5	per 1000 sf
<i>Parking Office Required</i>	60	Spaces
Office	493,324	
<i>Parking Office</i>	0.5	per 1000 sf
<i>Parking Office Required</i>	247	Spaces
Hotel / Meeting Space	136,652	
<i>Hotel Rooms</i>	200 rooms	
<i>Parking Hotel Required</i>	225	1/key, plus 25
Movie Theatre	15,000	
<i>Parking Theatre</i>	2.5	per 1000 ft
<i>Parking Theatre Required</i>	38	Spaces
Buildings - Private		
Total Parking Needed	1,919	
Parking Surface on street	241	66,275
Parking Structured Above-Grade	1,678	545,358
Temp. Parking on Gravel Lots	0	
Public Improvements		
Market Structure / Pavilions	93,597	
Plaza Space	160,367	
Historic Renovation	18,528	
Total Square Feet	272,492	

Table 6.1 Total Development Program

Program Constraints

While the main goals of creating a diverse and mixed program are mentioned above this thesis also takes into account the financial realities and constraints that exist. This means that the programmatic elements must be both socially and financially viable. The following data table describes construction costs and lease rates in San José:

	\$ per m2	\$ Per sf	/sf/yr	Notes
Retail	\$25.00	\$2.33	\$28	Source: costaricacommerical.com
Office	\$16.00	\$1.49	\$18	Source: costaricacommerical.com
Medical Office	\$17.00	\$1.58	\$19	Medical office in San José (Source: costaricacommerical.com)
Residential Unit	\$2,188	\$203.49	\$2,442	1,800 square foot high end residential unit (Source: 4salebyownercostarica)
Parking Lease	\$120	N/A	\$120	\$120 per year parking rent (Source: www.colliersmn.com)
Office Comp 1	\$19.00	\$1.77	\$21.21	Lease Rate Commercial / office (Source: R. Steinvorth GRUPO IECA S.A.)
Office Comp 2	\$14.00	\$1.30	\$15.63	Lease Rate Commercial / office (Source: R. Steinvorth GRUPO IECA S.A.)
Hotel	\$100-150	N/A	\$125	Price Per Night in San José Hotel of Similar Quality (Source: Hotels.com)

Table 6.2 Construction & Lease Data

Chapter 7: Design Strategy

The Urban Plan

The first step in designing the master plan is to study connectivity throughout site and the surrounding area. In doing this is it important to determine what the block types should be. At the same time building program should be applied to the site. To start to determine what overall massing strategies should be used. It is also important to determine what buildings should be preserved on the site. The following studies were complete to explore the overall master plan:

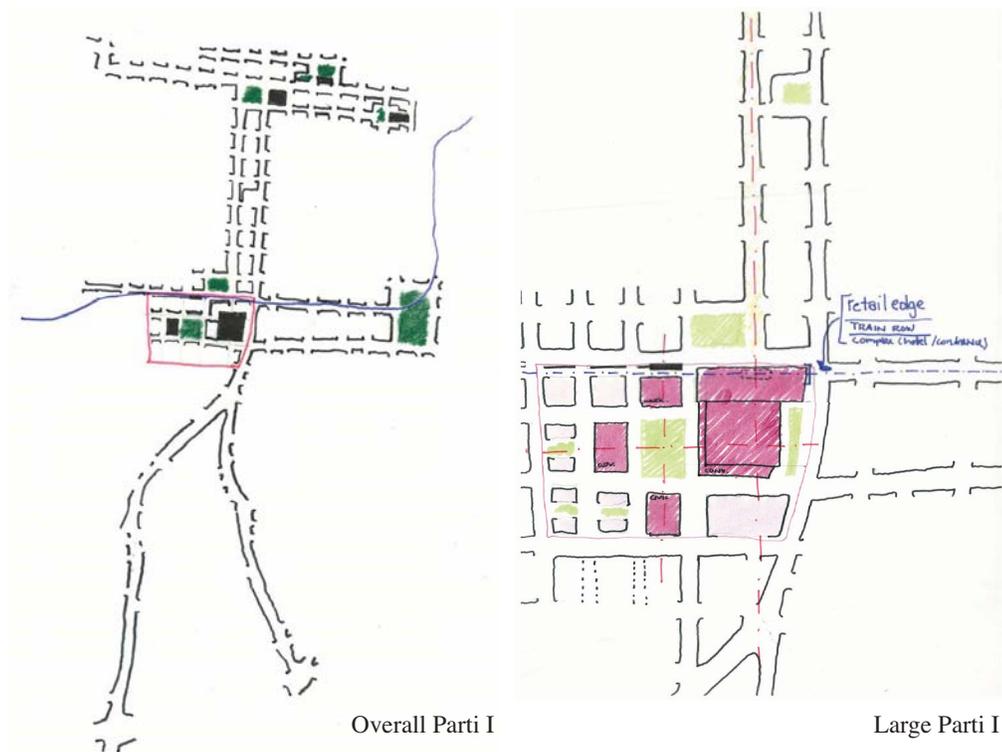


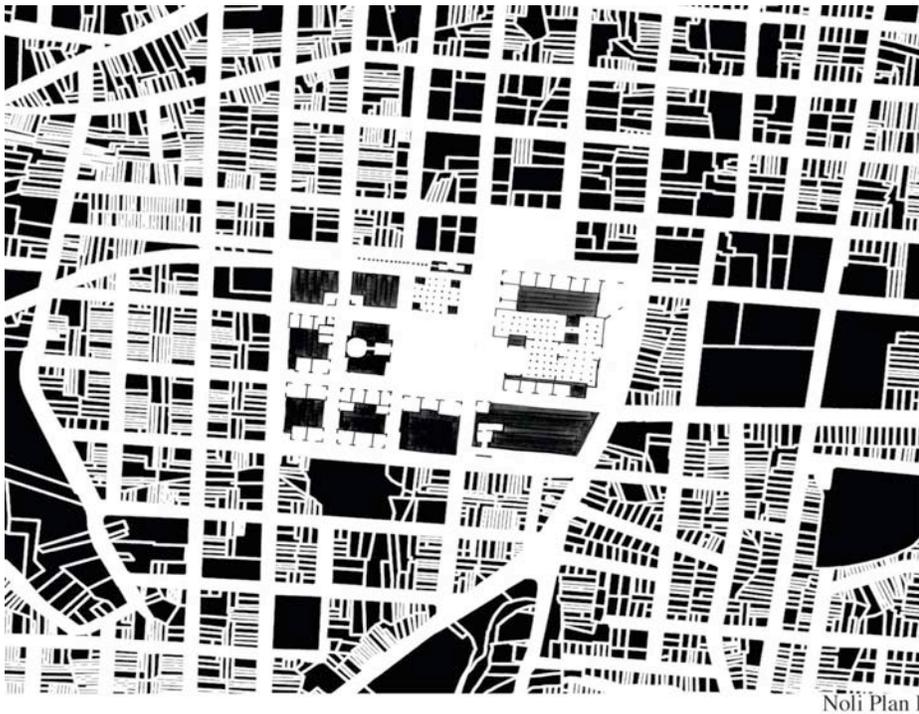
Illustration 7.1 Parti 1



Plan & Section I

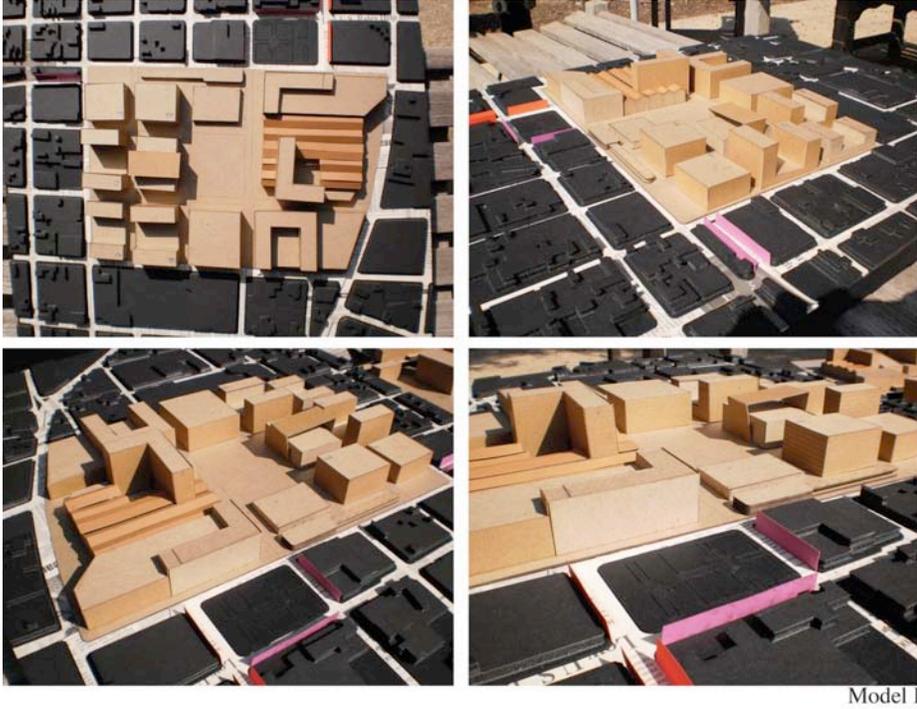
Section Through Civic Building & Park

Illustration 7.2 Plan & Section 1



Nolli Plan I

Illustration 7.3 Nolli Plan 1

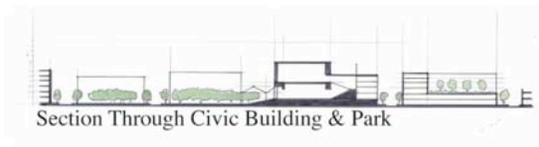


Model I

Illustration 7.4 Model Images 1



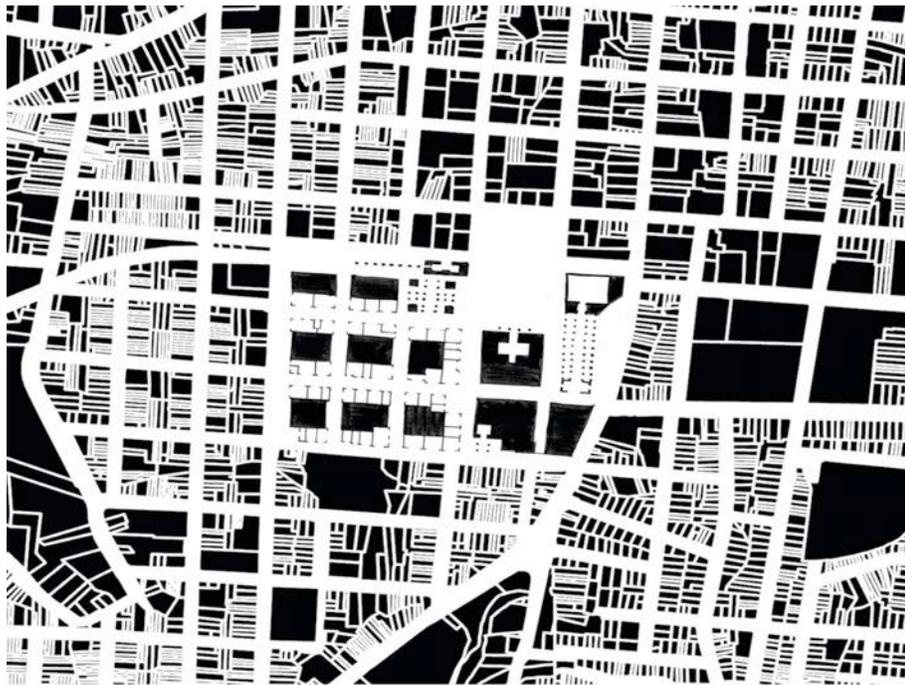
Illustration 7.5 Parti 2



Section Through Civic Building & Park

Plan & Section IIA

Illustration 7.6 Plan & Section 2



Nolli Plan IIA

Illustration 7.7 Nolli Plan 2

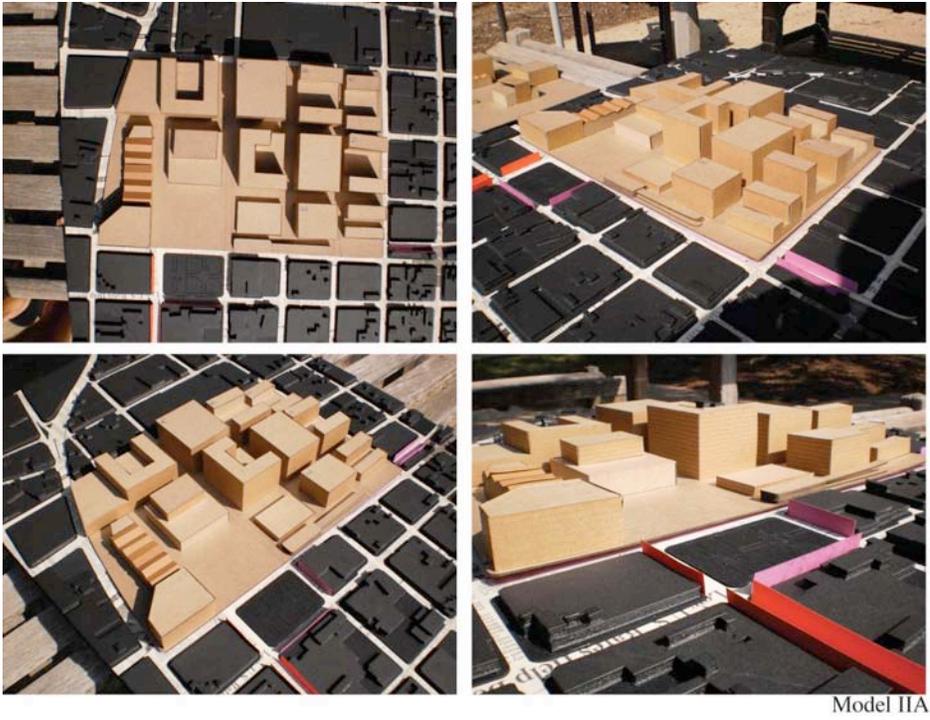
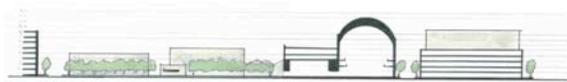


Illustration 7.8 Model Images 2



Illustration 7.9 Parti 3



Section Through Civic Building & Park

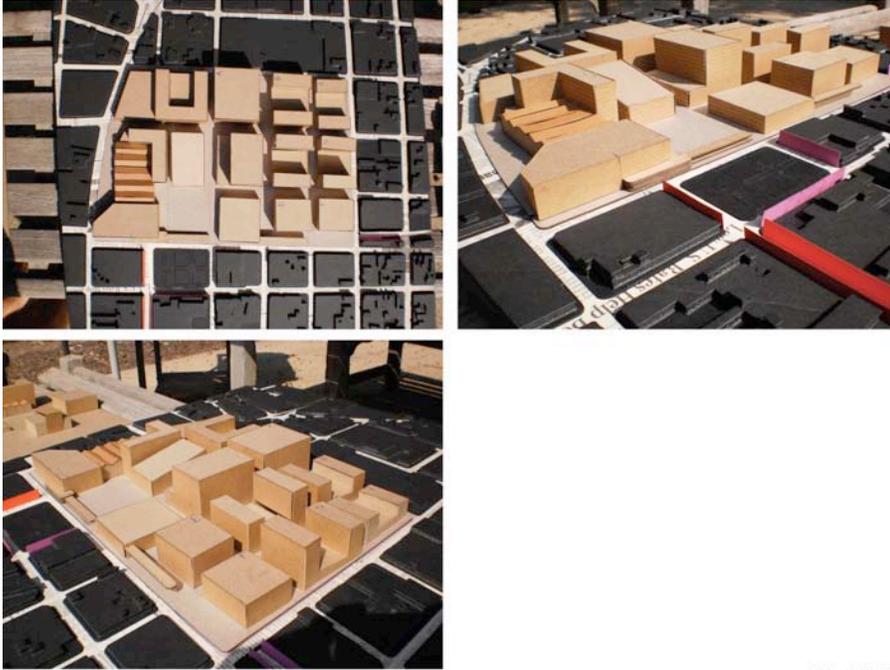
Plan & Section III

Illustration 7.10 Plan & Section 3



Noli Plan III

Illustration 7.11 Noli Plan 3



Model III

Illustration 7.12 Model Images 3

After creating the above site studies it became clear that the hieratical building was not reading as a figure or object building in the context of the city. Additionally the public space did not work like that of the existing San José type, as mentioned in the site analysis chapter (see illustration 3.13). This resulted in the following development of the master plan. It should be noted the element of the existing train shed, the building massing on the eastern portion of the site has been removed.



Illustration 7.13 Preliminary Site Plan A

The above site plan works to connect the Pacific Station Site to its surrounding context with its street grid. The public space becomes more developed similar to that of San José. The existing park in the north is connected to the main plaza, east of the government center, through a public market space and park network. One challenge is that the government building is not read as an object building, but rather as a normal fabric type of building.



Illustration 7.14 Preliminary Site Plan B

In the above site plan the street grid creates more connections to the existing infrastructure. The development of the public space becomes more complex with the redevelopment of the existing park in the north, and two plazas surrounding the national assembly building. Connecting these is an outdoor market space. These two plazas create two different faces to the government assembly building. The east side is a more formal drop off where cars can arrive and the west side a more informal space where people can gather under shade trees. A major problem in this plan is that the public spaces are not clearly connected north to south.

As these site plans were developed the overall building program and massing was explored. For each iteration the numbers were calculated for overall building program. This allowed the changes to be quantified.

Public Space

The next step in the design process is to more closely look at how the public space and buildings start to form the experience of being there. The following image was one in a series of iterations looking at how the main public space is formed. A series of pavilions has been added to create a continuous band or row of program; linking the different areas of public space. Additional areas should be shaded to protect from the tropical sun. The use of shading structures and trees is explored.

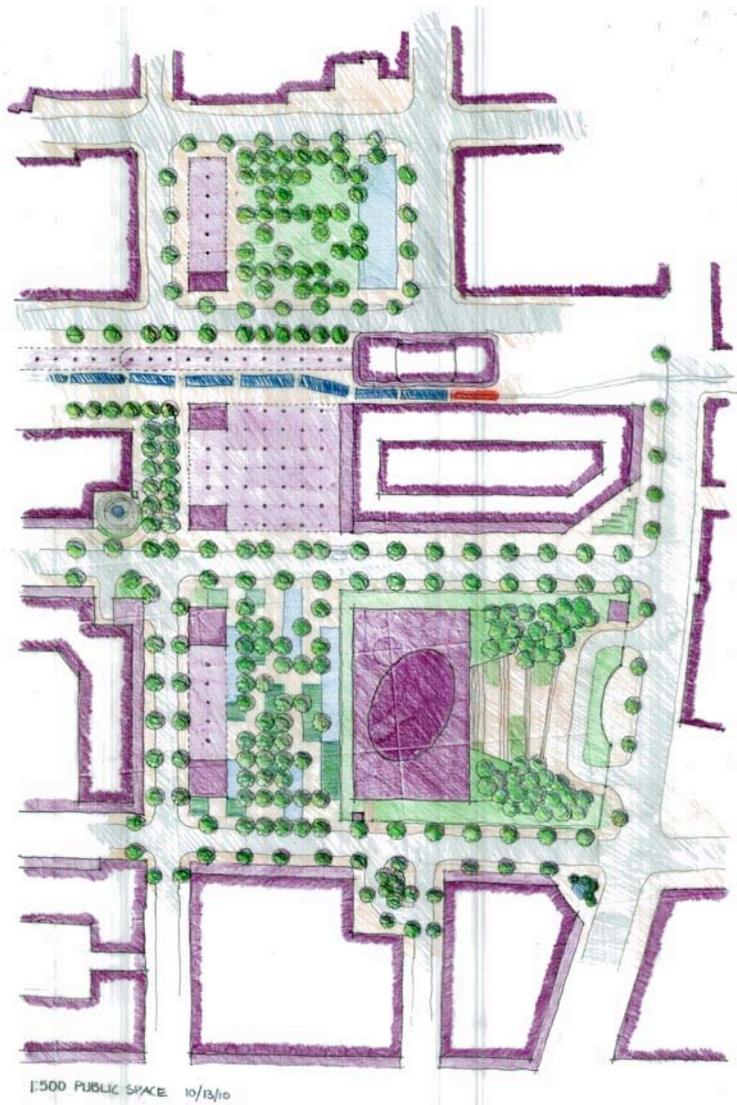


Illustration 7.15 Pacific Station Public Space Study

Building Form

In developing the master plan certain setbacks were needed to give the entire development a constant character. This process began by looking at the way that current development models are working in San José. The following diagram talks about a number of these developments.



Illustration 7.16 Typical Development

As a response to issues mentioned in the diagram above the following building guidelines were created:

- All buildings need to have a clear relationship to the street.
- Sidewalks should be 4m or 6m wide and provide areas for street planting.
- If ground level parking is present it is only found on the street and the building maintains street frontage.
- East – West Streets become the primary streets allowing service entrances on the north-south streets.
- There is a four-meter building setback at the fifth and tenth floor levels.
- Maximum building allowed is up to fourteen stories to allow light and air to the street below.
- Buildings should be orientated in the east-west direction for better solar orientation and provide either horizontal or vertical solar shading wherever possible.
- The facades should be deep to allow for occupiable areas and solar shading.
- Flat roofs should be avoided when possible because of the amount of rainfall.
- Building arcades should be used on the main east-west streets to allow for solar shading and protection from the rain. These should be optional on north-south streets.
- Narrow building massing allows for natural ventilation.

Chapter 8: Design Proposal

The Urban Plan

The overall master plan reflects the need to create a place that connects to its surroundings as well as creating a mix of uses that will allow for this project to be economically viable. These uses were selected with this in mind.



Illustration 8.1 Site Plan



Illustration 8.2 East West Site Section



Illustration 8.3 North South Site Sections



Illustration 8.4 Photograph of the Model

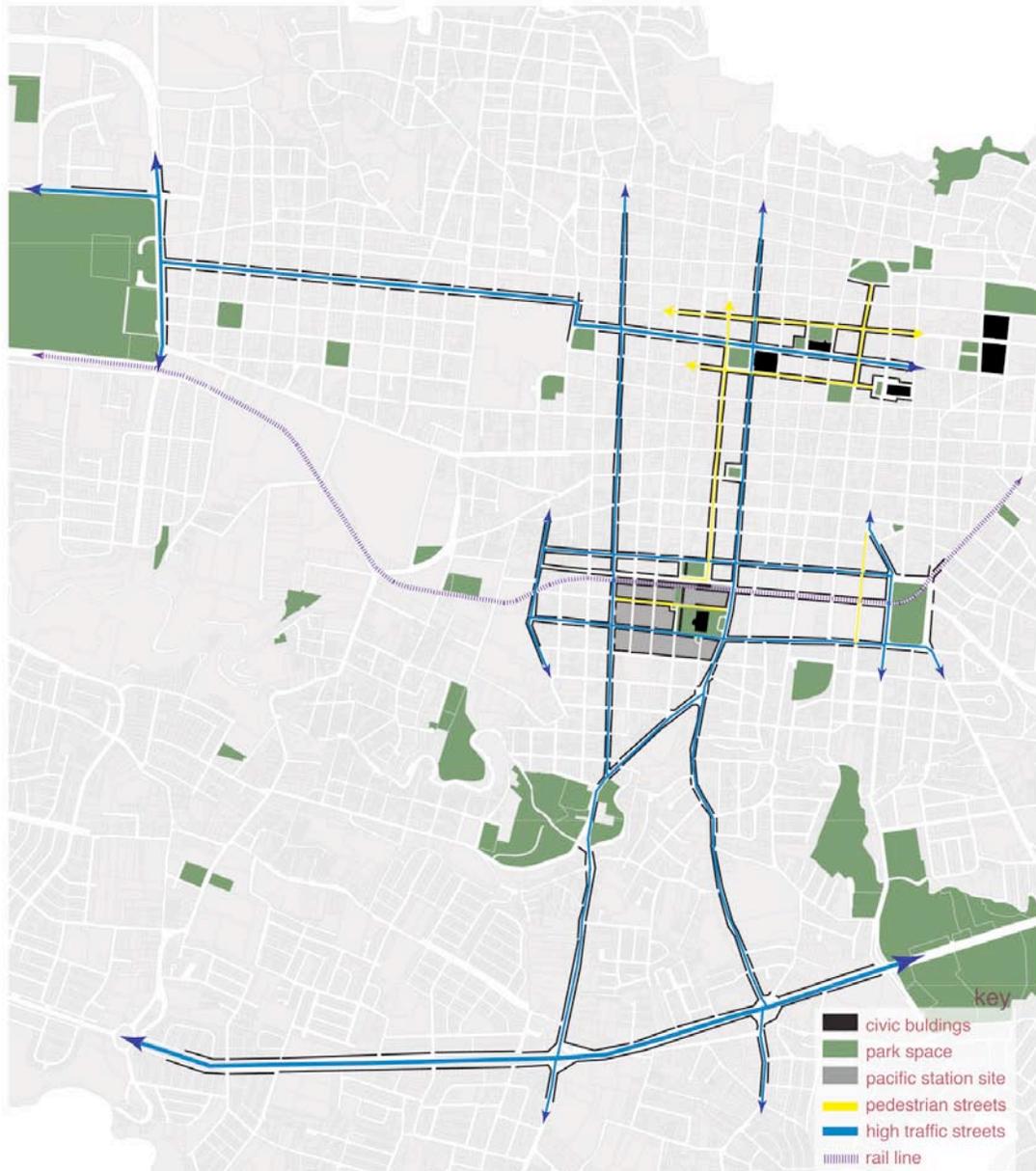


Illustration 8.5 Site Connectivity

The above figure exhibits how Pacific Station ties into the existing networks of San José. The major north south routes, marked in blue, connect downtown to the ring road and the suburbs beyond. The network of pedestrian streets is continued south connecting to the site as shown in yellow.

Phasing Plans

The phasing plans were established based upon both place making and overall economic viability in the current market.

Phase One

Phase one was developed Phase one is has the largest amount of participation by the government partner. This investment by the government will serve as the catalyst development within Pacific Station and the surrounding area. This investment will also attract private capital. The building program is as follows:

Building Program Component	Phase 1			Phase 1
	2012	2013	2014	Total
Government Civic Center	118,360	0	0	118,360
<i>Parking Government Office</i>	237	0	0	237
<i>Parking Gov't Office Required</i>				
Government Office Space	90,603	0	55,377	145,980
<i>Parking Government Office</i>	181	0	111	292
<i>Parking Gov't Office Required</i>				
Retail	31,688	19,368	0	51,056
<i>Parking Retail</i>	63	39	0	102
<i>Parking Retail Required</i>				
Residential				
Residential Square Feet	0	58,104	0	58,104
For Sale	0	0	0	0
Rental	32	0	0	32
<i>Parking Residential</i>				
<i>For Sale</i>	0	0	0	0
<i>Rental</i>	32	0	0	32
<i>For Sale</i>				
<i>Rental</i>				
Office	90,603	0	55,377	145,980
<i>Parking Office</i>	45	0	28	73
<i>Parking Office Required</i>				
Hotel / Meeting Space	0	136,652	0	136,652
<i>Hotel Rooms</i>	0	200	0	200
<i>Parking Hotel Required</i>	0	225	0	225
Buildings - Private				656,131
Total Parking Needed				961
Parking Surface on street				103
Parking Structured Above-Grade				723
Temp. Parking on Gravel Lots				135
Public Improvements				
Market Structure / Pavilions	0	83,648	0	83,648
Plaza Space	147,454	0	0	147,454
Historic Renovation	18,528	0	0	18,528
Total Square Feet				249,630

Table 8.1 Phase One Data



Illustration 8.6 Phase One Plan

Phase Two & Three

Phases two and three were developed to be flexible. While they were developed under current market conditions they can respond as necessary based upon the condition of the market what the market is doing at that time. Phase two works to complete the retail street and the building program is as follows:

Building Program Component	Phase 2		Phase 2	
	2015	2016	2017	Total
Retail	22,143	0	21,520	43,663
<i>Parking Retail</i>	44	0	43	87
<i>Parking Retail Required</i>				
Residential				
Residential Square Feet	199,974	0	0	199,974
For Sale	56	0	0	56
Rental	56	0	0	56
<i>Parking Residential</i>				
<i>For Sale</i>	56	0	0	56
<i>Rental</i>	56	0	0	56
<i>For Sale</i>				
<i>Rental</i>				
Medical Office	119,436	0	0	119,436
<i>Parking Office</i>	60	0	0	60
<i>Parking Office Required</i>				
Office	197,779	0	0	197,779
<i>Parking Office</i>	99	0	0	99
<i>Parking Office Required</i>				
Movie Theatre	15,000	0	0	15,000
<i>Parking Theatre</i>	38	0	0	38
<i>Parking Theatre Required</i>				
Buildings - Private				575,852
Total Parking Needed				395
Parking Surface on street				112
Parking Structured Above-Grade				131
Temp. Parking on Gravel Lots				286
Public Improvements				
Market Structure / Pavilions	93,597	0	0	93,597
Plaza Space	12,913	0	0	12,913
Historic Renovation	0	0	0	0
Total Square Feet				
Parking Surface on street	0	0	0	30,800
Parking Structured Above-Grade	0	0	0	42,640
Total Development Build out	554,332	0	21,520	618,492

Table 8.2 Phase Two Development Data



Illiustration 8.7 Phase Two Plan

Phase three works to close out the southern boundary of the site. Its uses are varied and contains the following building program:

Building Program Component	Phase 3					Phase 3
	2018	2019	2020	2021	2022	Total
Government Office Space	95,657	0	0	0	0	95,657
<i>Parking</i>						
Government Office <i>Parking Gov't Office Required</i>	191	0	0	0	0	191
Retail	19,368	0	0	0	6,618	25,986
<i>Parking Retail</i>	39	0	0	0	13	52
<i>Parking Retail Required</i>						
Residential						
Residential Square Feet	185,072	0	137,729	0	118,854	441,655
For Sale	51	0	38	0	49	139
Rental	51	0	38	0	17	107
<i>Parking Residential</i>						
For Sale	51	0	38	0	49	139
Rental	51	0	38	0	17	107
For Sale						
Rental						
Office	0	0	0	0	149,565	149,565
<i>Parking Office</i>	0	0	0	0	75	75
<i>Parking Office Required</i>						
Buildings - Private						712,863
Total Parking Needed						564
Parking Surface on street						26
Parking Structured Above-Grade						1,345
Temp. Parking on Gravel Lots						0
Parking Surface on street	0	0	0	0	0	7,150
Parking Structured Above-Grade	0	0	0	0	0	437,071
Total Development Build out	300,097	0	137,729	0	275,037	1,149,934

Table 8.3 Phase Three Development Data



Illustration 8.8 Phase Three Plan

Site Uses

One of the major goals was to not only create a destination within San José, but a network of places. The following two diagrams identify the land uses by blocks and the places within San José.



Illustration 8.9 Land Use

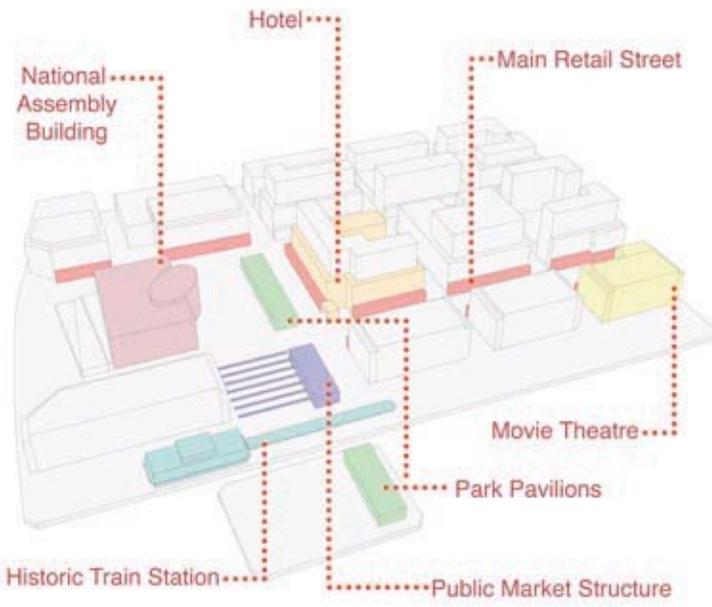


Illustration 8.10 Places at Pacific Station

Public Space

The following images begin to speak about the public realm of the overall design. The noli plan of the main public spaces of the buildings begin to highlight the main shopping street and the main public spaces. The perspectives are a series of views as a visitor would travel south from the existing park to the market pavilion and finally to the plaza on the western side of the assembly building.



Noli Plan scale 1:1000

Illustration 8.11 Noli Plan



Illustration 8.12 View Looking South



Illustration 8.13 View From the Train Station Platform



Illustration 8.14 View Within the Plaza

Building & Street Types

The following illustrations show the building and street types that were developed.



Illustration 8.15 Typical Section of a Commercial Building



Commerical Building Types

Illustration 8.16 Commercial Building Types

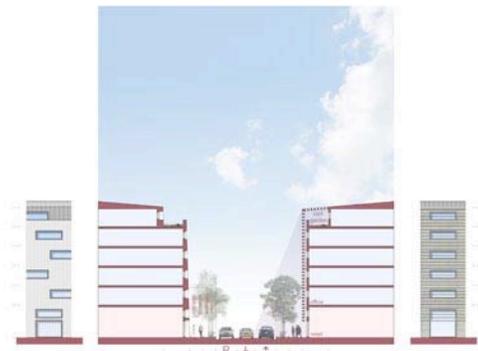


Illustration 8.17 Typical Residential Building Type

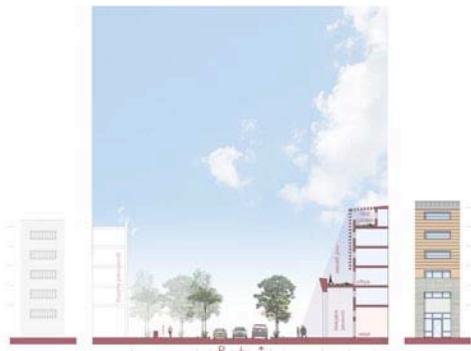


Residential Building Types

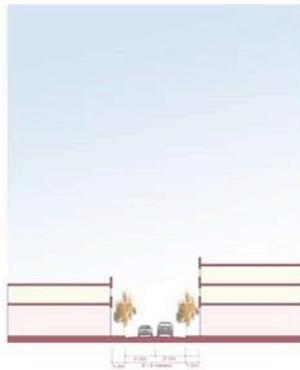
Illustration 8.18 Residential Building Type.



north south street section (typ)



public street section (typ)



existing street section (typ)



east west street section (typ)



Street Types scale 1:125

Illustration 8.19 Street Types

Chapter 9: Conclusion

This thesis represents the dual nature of design and development. It was the goal of this thesis to demonstrate this relationship on the urban scale in terms of development and place making. By selecting the government as a partner in development and building around their needs for a new assembly building a reason for being or catalyst development is realized. This in turn can help transform the surrounding blocks from under utilized rail yards to a vibrant part of the city that provides activity, and profits for the city.

This model of development directly opposes that of contemporary San José. Where the culture is one developer one building. Pacific Station represents how creating a common language and building massing can result in a more unified area. This allows the buildings to have a relationship at the street level; not surrounded by seas of parking. These same principles of developing pedestrian friendly streets and developments can be used outside of the site.

The magnitude and size of this project represents an initial investment by the government to create change in an area of the city that is underdeveloped. This project can serve as the catalyst project and future development can build off of it.

One of the most significant results of the project is the rigor in which the existing public space in San José was explored. At first glance all of these spaces seem arbitrary, but upon further investigation they have a specific type that seems to work well for the city. This idea of the public realm was further explored in this thesis project. The resulting spaces within this project attempt to act in the same way as the existing spaces.

One criticism that may come forward is that this project does not fit into its existing context. When the project is looked at from a more macro scale this argument is not as strong. Current development projects in San José showcase an even higher density than the 2.0 shown in here. Additionally the context immediately surrounding the site is changing. Just three blocks north of the site a fourteen-story hospital has been built; reflecting the changing density in the city.

Bibliography

1. Almandoz, Marte Arturo. "Chapter 10." *Planning Latin America's Capital Cities, 1850-1950*. London: Routledge, 2002. Print.
2. *CityCenterDC*. Web. 15 Dec. 2010. <<http://www.citycenterdc.com/>>.
3. "Costa Rica." *U.S. Department of State*. Web. 15 Dec. 2010. <<http://www.state.gov/r/pa/ei/bgn/2019.htm>>.
4. "Costa Rica Trains - Green Limon and City." *Central America Tourism Operator*. Web. 15 Dec. 2010. <<http://www.vacationcity.com/costa-rica/information/history/trains/>>.
5. Deloitte & Touche, S.A., ed. *Doing Business in Costa Rica*. Rep. 2009. Print.
6. Deloitte & Touche, S.A. *Medical Tourism: Update and Implications*. Rep. 2009. Print.
7. Emmanuel, M. Rohinton. *An Urban Approach to Climate-sensitive Design: Strategies for the Tropics*. New York: Spon, 2005. Print.
8. Enrolling, By. "Costa Rica." *Welcome to Travel.State.Gov*. Web. 15 Dec. 2010. <http://travel.state.gov/travel/cis_pa_tw/cis/cis_1093.html>.
9. Garbe / Harvard GDS, Raymond, comp. *Urban Revitalization in San Jose, Costa Rica*. Web. 15 Dec. 2010.
10. Lauber, Wolfgang, Peter Cheret, Klaus Ferstl, and Eckhart Ribbeck. *Tropical Architecture: Sustainable and Humane Building in Africa, Latin America, and South-East Asia*. Munich: Prestel, 2005. Print.

11. *National Harbor*. Web. 15 Dec. 2010.
<<http://www.nationalharbor.com/intro.htm>>.
12. "Planning and Development in San Jose." Personal interview. 15 June 2010.
13. Stainback, John. *Public/private Finance and Development: Methodology, Deal Structuring, Developer Solicitation*. New York: Wiley, 2000. Print.
14. *Welcome to St. Louis Union Station*. Web. 15 Dec. 2010.
<<http://www.stlouisunionstation.com/>>.
15. Yeang, Ken. *Tropical Urban Regionalism: Building in a South-East Asian City*. Singapore: Concept Media, 1987. Print.