




Botanika

NUEVO TOCUMEN

-CONCEPTUAL LAND USE PLAN-



PREPARED FOR AROPECUARIA S.A.

LOCATION MAPS (NTS)

The parcel being studied is a 280 hectare land parcel in Panama its located east of Tocumen International Airport and adjacent to Panama Global City intended for mixed use / residential development. The site can be accessed via the Panamerican highway from northern side of the property. The parcels northern tip is adjacent to a planned metro development



PANAMA - PACIFIC OCEAN

The site is located in Panama close to the Pacific ocean. The water in Panama bay is classified as a body of water plagued by Eutrophication. Agricultural and other runoff has contributed to the Eutrophication of this area, reducing runoff from the site should be a focus for bank treatment



PANAMA CITY

The site is located within driving distance from both the capital of Panama, Panama City and one of Panamas biggest city's San Miguelito, in addition to this the sites proximity to the airport makes it very accessible.



BOTANICA PARCEL

The Botanica parcel sits between Nuevo Tocumen and Petipolo. The northern tip of the site touches the pan American highway, this connection point will serve as the central access point for the entirety of the site. The site can also be accessed through a small dirt road that connects with the southern side of the site.

PERFORMANCE BASED DESIGN

TOPICS AND GOALS

Performance based design is a system based way of thinking that focuses on how to address and understand challenges at both regional and site levels. This design process focuses on how to better develop land to mitigate site constraints and build site resiliency. By analyzing site capacity's and issues early on in the process many site issues can be addressed before they occur. Our Performance based design framework helps to facilitate measurable design solutions by setting design goals and by developing design strategies early in the process. This approach helps EDSA achieve more thoughtful and innovative planning and design solutions while also improving site sustainability.

STORM WATER

- A. Protect, Rehabilitate, and restore riparian zones, including the sites streams and other water bodies
- B. Analyze hydrologic characteristics of the watershed and of the surrounding water basin to protect off
 - Site water resources
- C. Design storm water mitigation features into the landscape amenities
- D. Mitigate storm water runoff volumes with permeable surfacing and landscape features
- E. Reduce erosion and sedimentation runoff by slowing runoff velocity with natural system buffers

CONNECTIVITY

- A. Provide convenient access to public transportation
- B. Provide pedestrian friendly site access
- C. Create a well connected system of walkways and bike ways to promote Pedestrian mobility and improve site access
- D. Provide bicycle storage
- E. Minimize parking footprint by implementing shared parking
- F. Create logical transportation routes that are easy to navigate
- G. Plan a well connected road network to provide flexibility for vehicular

LOCATION

- A. Maximize connections to mass transit
- B. Locate development in proximity to jobs
- C. Ensure commercial parcels within development site are visible from major roads

LAND USE

- A. Create compact development parcels to maximize profit and reduce overall footprint
- B. Provide multiple uses to ensure the development of a healthy community
- C. Protect and enhance green space buffer around waterways
- D. Provide adequate recreational open space
- E. Design for resiliency to natural hazards (i.e., adaptability and durability)

SITE DESIGN

- A. Mitigate noise through design strategies such as buffering
- B. Implement underground utility's
- C. Incorporate natural tree shading to reduce direct sunlight to buildings and pedestrian walks
- D. Reduce heat island effect through shading strategies and by using high albedo materials
- E. Adapt design to respond to site specific geological conditions
- F. Create smart streets that are walkable and accessible
- G. consider affordability and diversity in product offerings and programmed uses
- H. Plan spaces that can host programmed community events and foster social interaction among Residents and visitors
- I. Minimize habitat fragmentation with green corridors
- . Protect and avoid developing within and floodplains



PARCEL LAND USE



STORM WATER MITIGATION

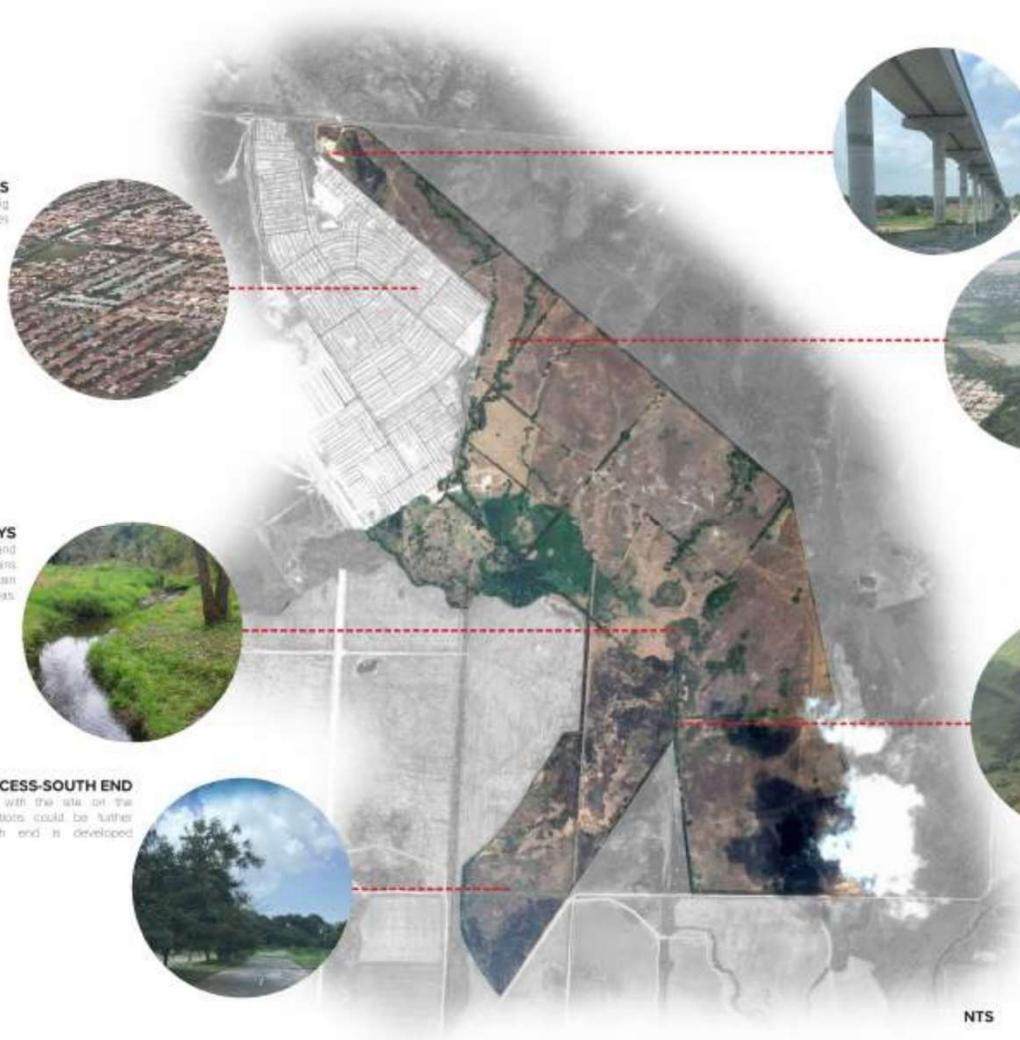


CONNECTIVITY



RECREATIONAL SPACE AND OPEN SPACE





COMMUNITY CONNECTIONS

Site access can be strengthened by connecting the site to existing neighboring communities



METRO LINE

The metro line enters the site from here it runs adjacent to the proposed primary roadway. The metro line takes up a strip of land with the width of 45 meters. The metro lines proximity to the site provides better connectivity from the site to the surrounding area.



METRO YARD

The metro line enters the site from the northern side and connects to the metro yard. The view into this area should be screened as land is developed.



EXISTING WATERWAYS

The parcel has a relatively expansive series of streams and small water bodies, the proposed land-use plan maintains bank stability by ensuring that these areas remain naturalized. Water body's could function as focal areas



SITE DRAINAGE

The water bodies and streams that run through the site flow towards the ocean through this area, protection of the waterways natural buffer should be taken into account while re grading the parcel for development



EXISTING SITE ACCESS-SOUTH END

Existing roadways connect with the site on the south side, these connections could be further improved when the south end is developed

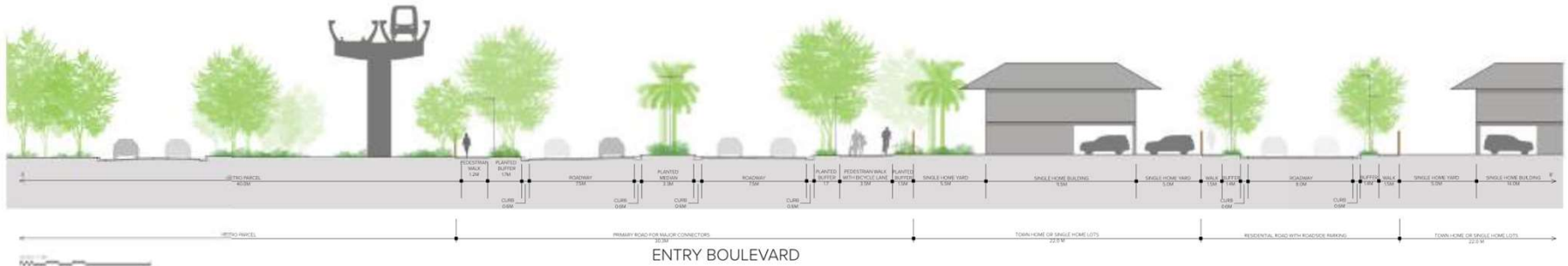


NTS









ENTRY BOULEVARD



INTERNAL ACCESS ROAD



PRESERVATION DIAGRAM

LEGEND:
● PRESERVED NATURAL SPACE



PARCEL DEVELOPMENT DIAGRAM

LEGEND:
● DEVELOPED AREAS EXCLUDING ROADWAYS



PHASING DIAGRAM



- LEGEND:**
- PHASE 1
15.76 HECTARES
 - PHASE 1A
15.62 HECTARES
 - PHASE 2
39.89 HECTARES
 - FUTURE DEVELOPMENT
150.38 HECTARES

CIRCULATION DIAGRAM



- LEGEND:**
- 4 LANE ROAD WITH 4M MEDIAN
 - 4 LANE ROAD
 - 2 LANE ROAD
 - PEDESTRIAN WALK
 - BICYCLE LANE
 - MAIN SITE ACCESS POINT
 - MINOR ROADWAY
 - MINOR ROUNDABOUT
 - SECONDARY SITE ACCESS POINT
 - SECONDARY ROADWAY
 - SECONDARY ROUNDABOUT
 - MINOR MAIN ACCESS POINT
 - MINOR ROADWAY



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