Eco-Landscape Design

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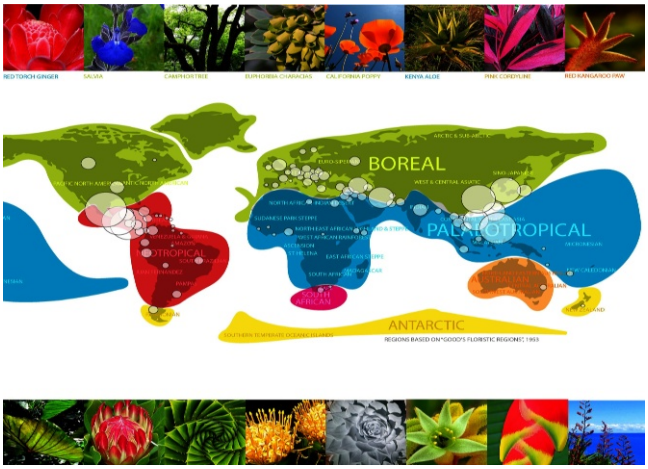

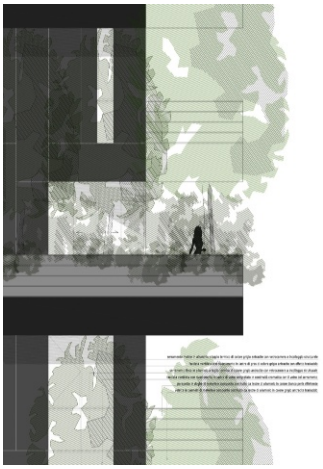

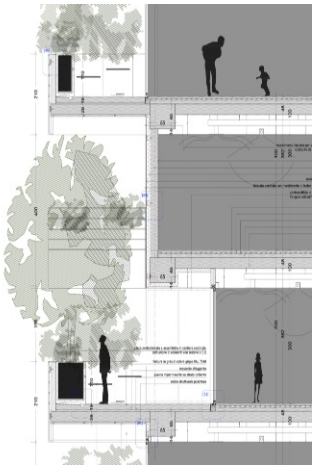

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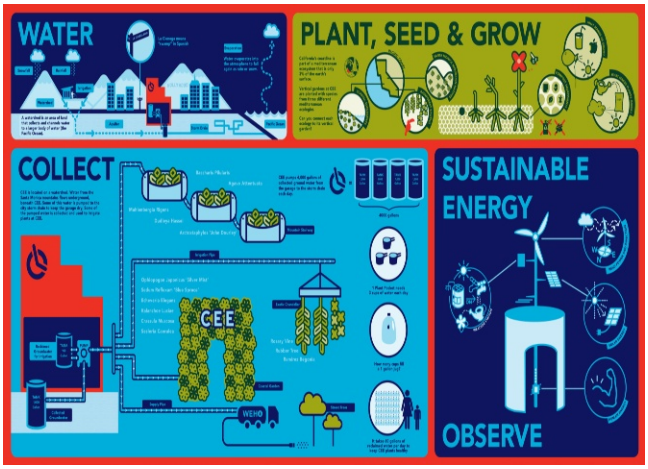


Rivers, Shores and Islands

Conservation and Education

Introduction

Ecology: The study of organisms in relation to one another and to their surroundings.

Landscape: The features of a land area as seen in broad view.

Design: A preliminary outline or drawing for something that is to be made; the art of producing these.

On March 31st, 2014, the United Nations report entitled "Climate Change 2014, Impacts Adaptation and Vulnerability" was published by the Working Group II of the Intergovernmental Panel on Climate Change (IPCC). The panel, meeting in Yokohama, Japan, held a press conference at which Chairperson, Rajendra K. Pachauri, issued his strongest warnings to date, stating that climate change caused by human activity is likely to be "severe, pervasive and irreversible".

The report predicts that a general increase in land and sea temperatures over the course of the 21st century; will cause some polar ice to melt, with consequential rises in sea levels. When combined with predicted increases in the incidence of extreme weather events, such as hurricanes, typhoons and prolonged storms, the IPCC warns of the potential severe impact on communities choosing to live in proximity to coastal regions and watercourses. The report also details the effects of severe drought on the world's ability to produce food and the impact of this on the poorest people in the world.

The IPCC again urges all member countries to reduce the prolonged dependence on fossil fuels (the combustion of carbon) as a vital strategy to preserve the diminishing ozone layer of the earth's atmosphere; which protects the earth from the heat of the sun.

For the first time, this U.N. report also contained a note of optimism by acknowledging mankind's innate ability to adapt to changes in climate, natural or man-made and that the only constant factor affecting life on earth is change.

The ingenuity employed in adapting to change informs the content of Eco-Landscape Design and the previous titles in the Eco-series. By consulting with architects and designers in diverse geographical locations, we are able to demonstrate best practice in coping with the climatic conditions endured in various parts of the globe. The dissemination of this information will inform policy makers and future design practitioners as conditions and weather events shift from one region to another.

Climate is not the only significant catalyst for change. The world's population is predicted to increase to 9 billion by the middle of the 21st century, this would represent a threefold increase since 1960. Professor Hans Rosling, lecturing on the subject of global health in September 2012 discusses the paradox that, "only by raising the living standards of the poorest, and increasing child survival rates, can population growth be checked".

The realised projects featured in Eco-Landscape Design focus on raising the living standards of all socioeconomic groups, varying in location from the mega-cities of the world to remote, isolated communities.

Public Open Space: innovations in this area of landscaping demonstrate how a thoughtfully designed public realm can make cities more habitable.

Dwellings and Workplace: discusses designs for coping with human population growth in mega-cities and the strategies required to promote and maintain biodiversity.

Shores, Rivers and Islands: features site specific solutions for living in close proximity to the life sustaining, fragile element of water.

Conservation and Education: projects attempt to inform people how to protect fragile landscapes and resources by living in harmony with nature.

John A. Flannery

Grand Park

Los Angeles, USA

2012

RIOS CLEMENTI HALE STUDIOS

www.RCHSTUDIOS.com

E Pluribus Unum can be translated as 'many uniting as one'. The motto is as appropriate now as it was when first suggested by the committee that Congress appointed to design the Great Seal for the United States of America on July 4th, 1776. When Rios Clementi Hale Studios (RCHS) was commissioned by the County of Los Angeles to transform a neglected 12 acre open downtown space into a landmark urban park, the Grand Avenue Committee may well have had the motto in mind. The client's brief was "to provide a unifying place that would appeal to the regions diverse communities as well as visitors from around the world".

The previously underused open space was originally designed in 1966 and featured the Arthur J. Will Memorial Fountain which is restored and rejuvenated in the vibrant new layout (Figs. 1, 2). Arthur J. Will was the Chief Administrative Officer for the County of Los Angeles in the 1950s and a civil engineering graduate of the University of Southern California.

To create the Park for Everyone, the designers and engineers had to contend with a 90 feet grade change along four city blocks. Consequently, a great deal of submerged infrastructure work was required to mitigate level changes and provide uninterrupted access for visitors of all levels of physical capability. However, the new Grand Park maintains the original alignment from Grand Avenue on the Western border running downhill to Spring Street on the Eastern boundary providing views of the iconic Los Angeles City Hall (Fig. 2).

Grand Park's pedestrian accessibility from Grand Avenue has been dramatically improved by the construction of the new terraced entrance. The entry totem designed by Suzzman / Prezja and Co. welcomes visitors in the 25 languages that are used on the Los Angeles County voter registration forms (Fig. 2). This area of the park was previously blocked and visually dominated by the ramps providing access to the underground parking which lies beneath the park. Visitors promenading gently down the slope to City Hall encounter four distinct public spaces as follows; Fountain Plaza and Performance Lawn punctuated by Olive Court, then Community Terrace and Event Lawn crossed by Broadway (Fig. 3).

Population | 3,857,799

Co-ordinates | 34°03'N
118°15'W

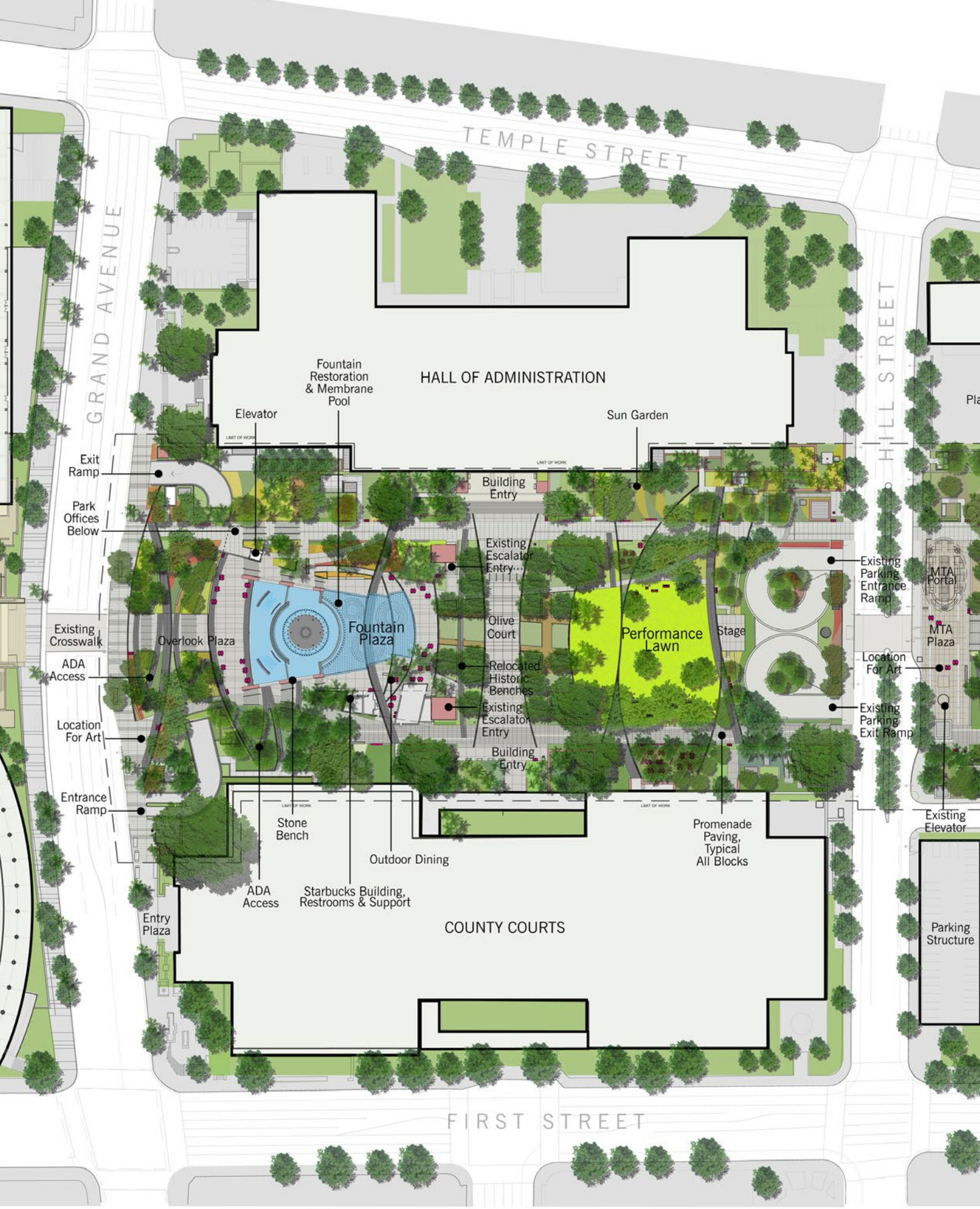
Elevation | 71 m (233')

Precipitation | 379.2 mm (14.93")

Temperature | Average High:
75.2 C (24 F)
Average Low:
55.7 C (13.2 F)

Humidity | 75.54%


le parc
pour
tous
GRAND
PARK
the park for
everyone
công viên dành
oor iedereen
der park für alle
大家的公園
het park voor
2012 iedereen
Парк
for everyone


TEMPLE STREET
GRAND AVENUE
HILL STREET
HALL OF ADMINISTRATION
Fountain Restoration & Membrane Pool
Elevator
Sun Garden
Exit Ramp
Park Offices Below
Building Entry
Existing Escalator Entry
Existing Parking Entrance Ramp
MTA Portal
Existing Crosswalk
Overlook Plaza
Fountain Plaza
Olive Court
Performance Lawn
Stage
MTA Plaza
ADA Access
Relocated Historic Benches
Location For Art
Existing Escalator Entry
Existing Parking Exit Ramp
Building Entry
Entrance Ramp
Stone Bench
Outdoor Dining
Promenade Paving, Typical All Blocks
Existing Elevator
ADA Access
Starbucks Building, Restrooms & Support
Entry Plaza
COUNTY COURTS
Parking Structure
FIRST STREET


HALL OF RECORDS
Loading / Service
BROADWAY
CRIMINAL COURTS BUILDING
New ADA Parking
New Ramp to Parking
Dog Run
SPRING STREET
Existing Elevator
Bleacher Seating & ADA Ramp
Central Stairs
Park Entry
Relocated Court of Flags
Community Terrace
Event Lawn
City Hall West Steps
Location For Art
Park Entry
CITY HALL
Parking Access
Multi-Use Marketplace
South Entry
LAW LIBRARY
Restrooms & Park Support
Existing Building Foundation
Existing Landscape
South Lawn

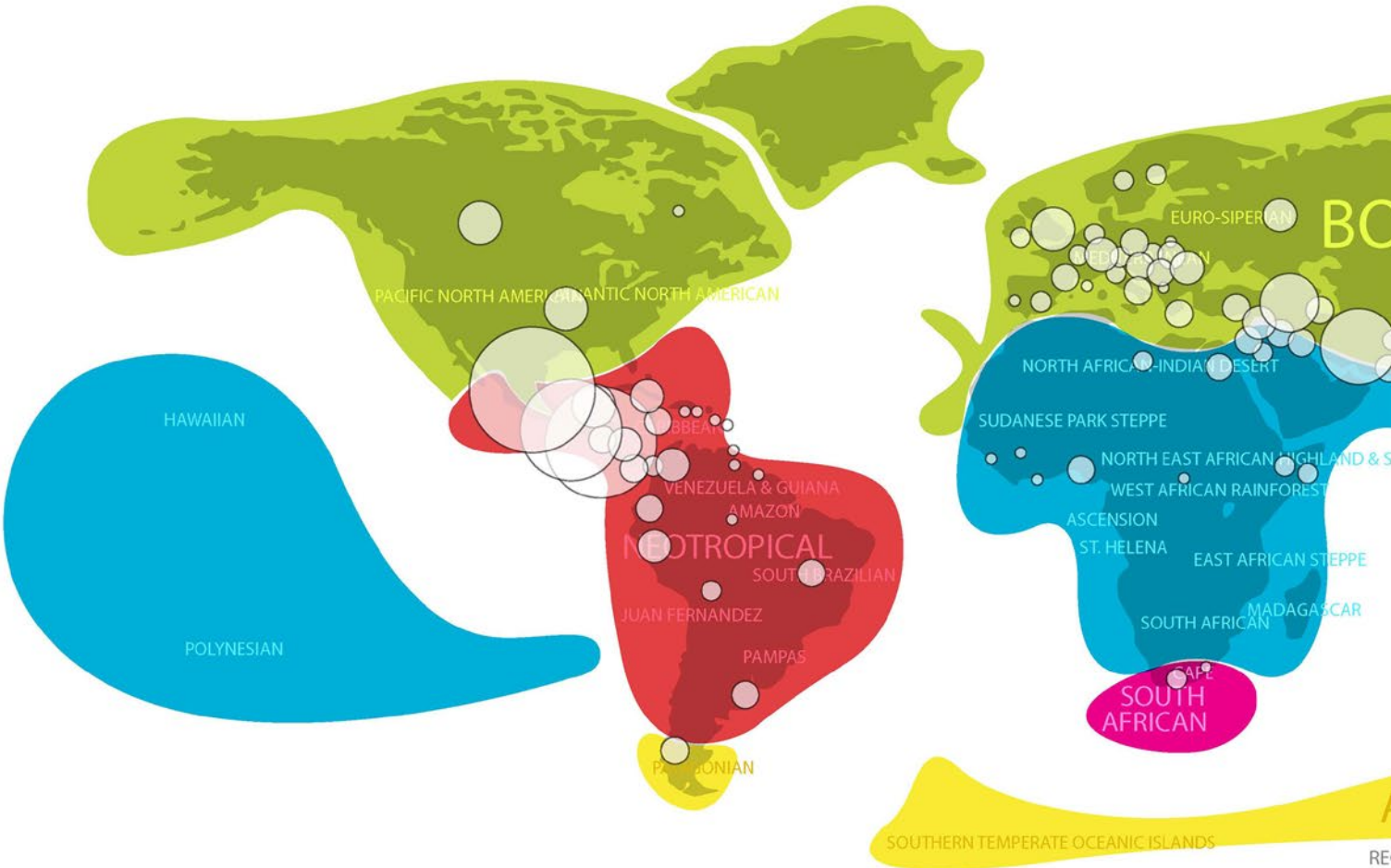
10 Grand Park | Los Angeles | USA | Fig. 4 above

RCHS entered into a lengthy planning consultation which included workshops with community and arts groups, alongside civic and governmental bodies. The concept that emerged was translated into a series of user friendly spaces designed to celebrate the ethnic diversity of Los Angeles residents. This phenomenon is most notably reflected in the eclectic nature of the floristic gardens. In keeping with the theme, the curving, meridian pathways that connect the distinct spaces are based on the Goode projection used for world maps (Fig. 4). Lawns, terraces, plazas, gardens and the aquatic fun provided by the interactive water features invite visitors to play and rest in the same way that Angelinos might relax in their own back yards. The 'yard' furniture designed by JANUS et Cie consists of 41 wall mounted benches, 120 cafe tables, 40 lounge chairs, 240 cafe chairs and, at the last count, 26 free standing benches, all distinctly finished in bright magenta evoking a reclaimed, domestic, outdoor feel (Fig. 5).

Retained mature trees are complimented by a planting palette drawn from the worlds six Floristic Kingdoms; South African, Boreal, Australian, Neotropical, Paleotropical and Antarctic (Fig. 6). The environmental factors instrumental in nurturing the plants of these regions are described on the educational plant markers. The LA climate appears to be as welcoming for the diverse plant life as it is for its human population.

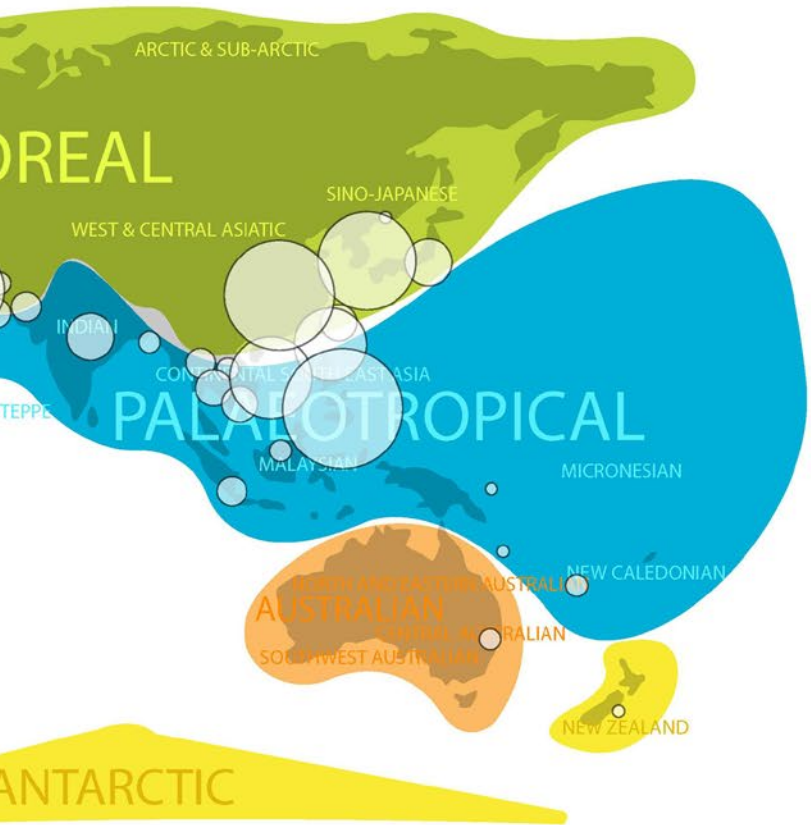
Grand Park | Los Angeles | USA | Fig. 5 above | Fig. 6 next page 11

RED TORCH GINGER SALVIA CAMPHOR TREE EUPHORBIA CHARACIAS CALIFORNIA POPPY

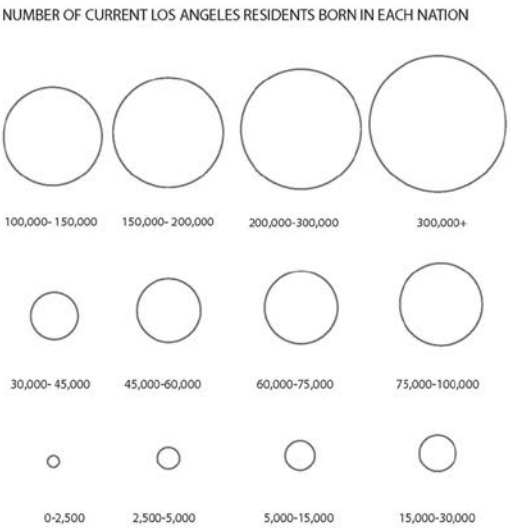


ELEPHANT EAR KING PROTEA GREEN ALOE LEUCADENDRON CHALK DUDLEYA

KENYA ALOE | PINK CORDYLINE | RED KANGAROO PAW | SWAMP BANKSIA



GIONS BASED ON "GOOD'S FLORISTIC REGIONS", 1953



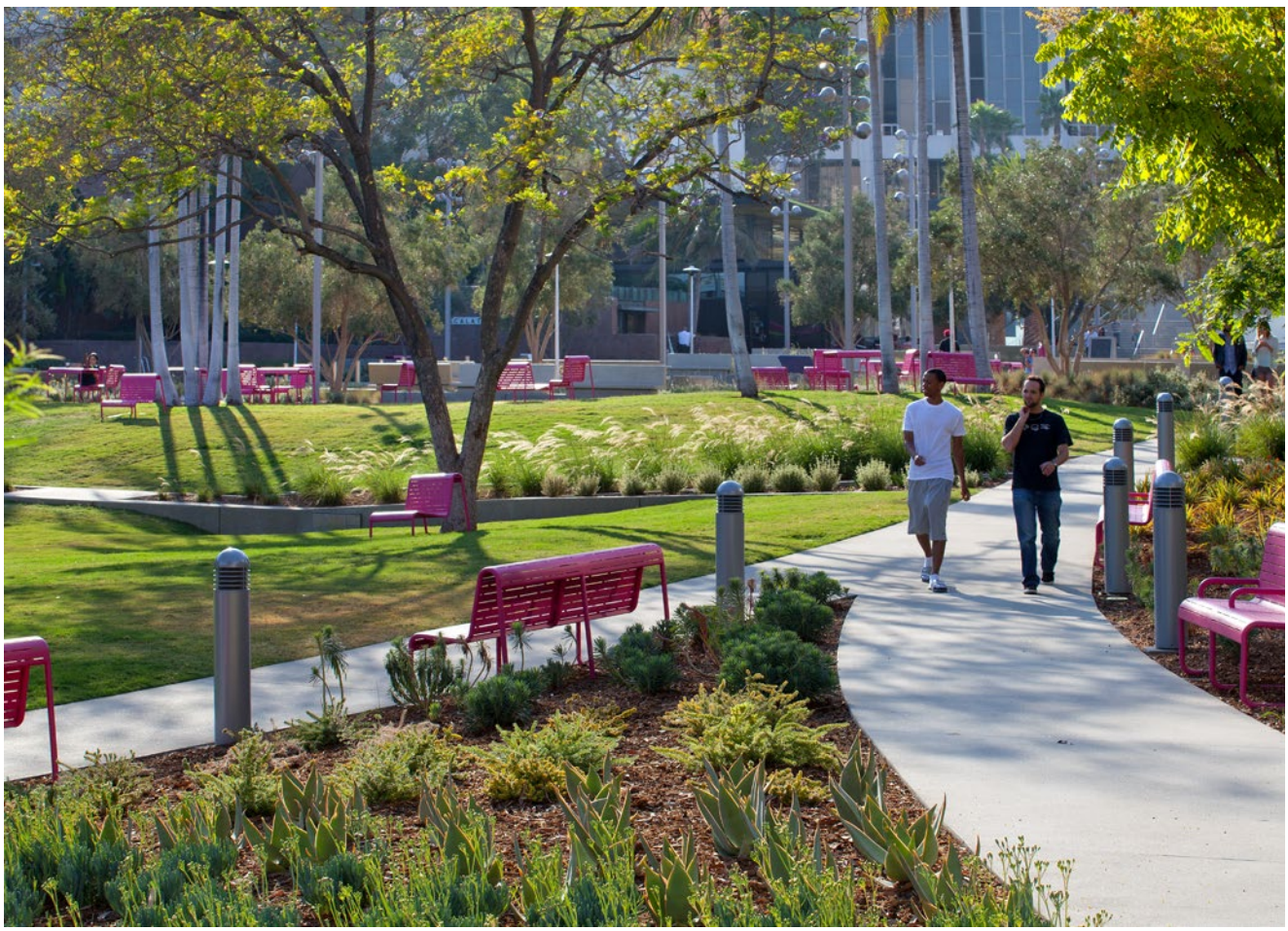
KANGAROO PAW | HELICONIA | NEW ZEALAND FLAX | BLACK SPINED AGAVE

Fig. 7 below right

The framework for the layered design elements (Fig. 9), is provided by the parallel walks, cross walks, meridian paths and the two city sidewalks within the site boundary. The floristic gardens are laid out within this framework and provide colourful punctuation to the main narrative flow of event spaces.

Underpinning the comprehensive reconstruction of Grand Park was the requirement to provide a sustainable facility that would be efficient in its use of water. The key component of this was the irrigation system designed to comply with Ordinance AB 1881, which has been adopted by the City and County of Los Angeles. Sub-surface drip tubes supplying water directly to the roots of drought tolerant plants, are controlled by moisture sensors and auto shut-off valves. Lawn areas of durable Bermudagrass (Fig. 7) utilise water efficient spray systems with rotary heads to minimise water loss. The projected 5 million gallons of storm water per annum is filtered through planters and disbursement lawns to minimise run-off to city storm drains.

During the construction process 50 of the site's 150 retained mature trees had to be removed, maintained and then re-planted into the new layout.



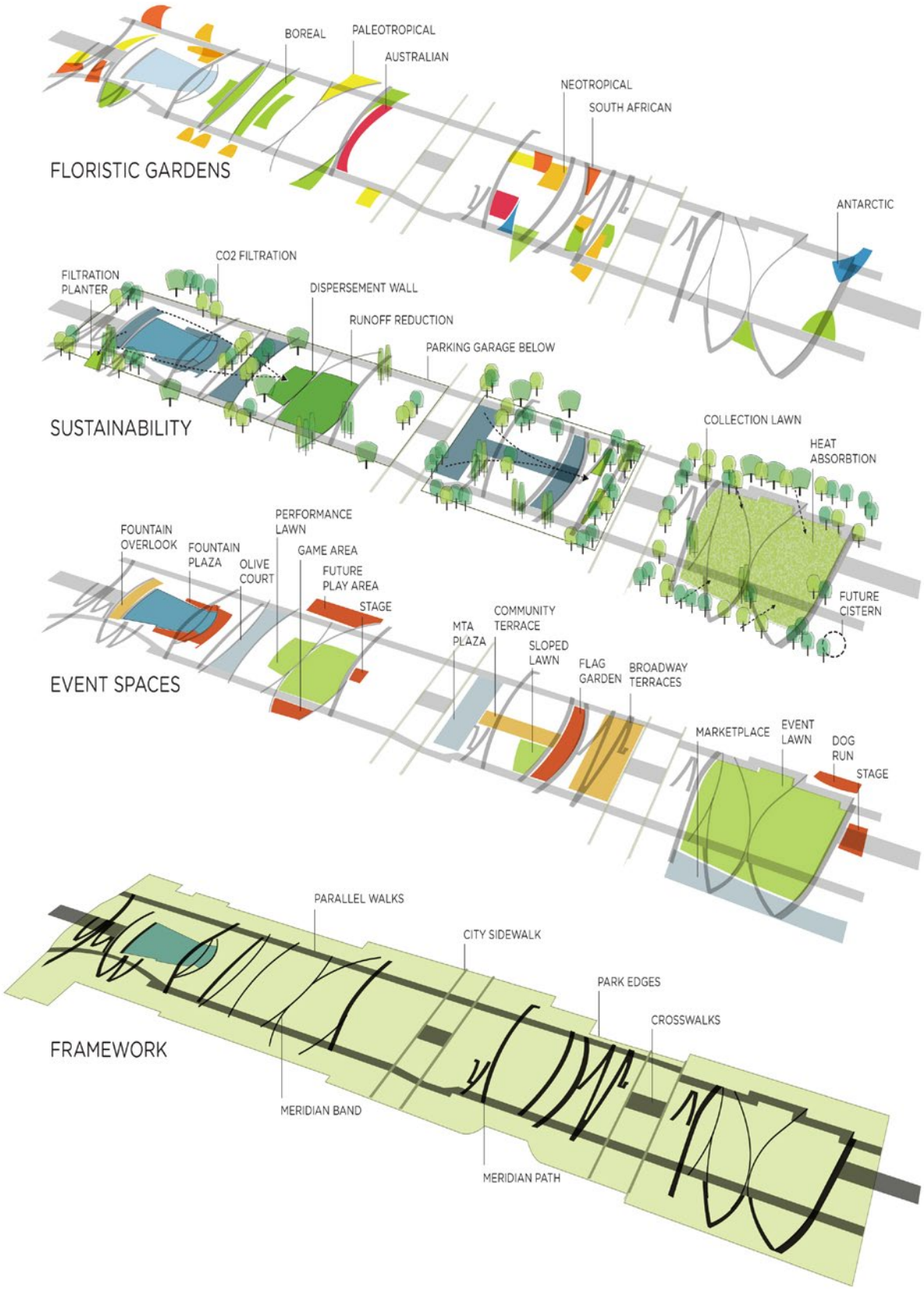
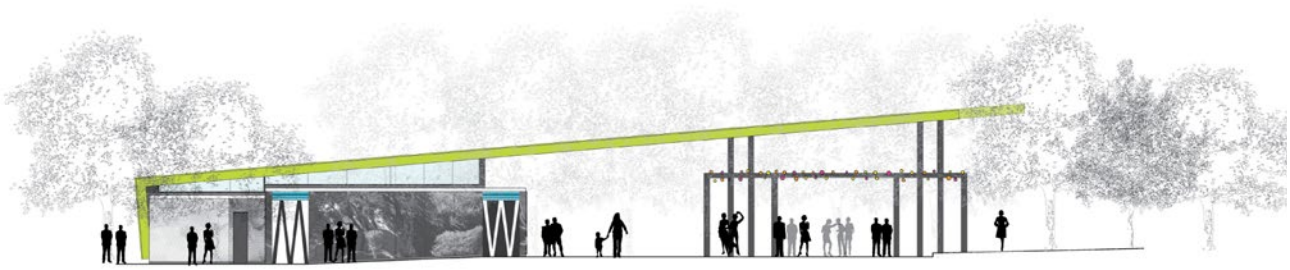

FLORISTIC GARDENS
BOREAL
PALEOTROPICAL
AUSTRALIAN
NEOTROPICAL
SOUTH AFRICAN
ANTARCTIC
SUSTAINABILITY
FILTRATION PLANTER
CO2 FILTRATION
DISPERSEMENT WALL
RUNOFF REDUCTION
PARKING GARAGE BELOW
COLLECTION LAWN
HEAT ABSORBTION
FUTURE CISTERN
EVENT SPACES
FOUNTAIN OVERLOOK
FOUNTAIN PLAZA
OLIVE COURT
PERFORMANCE LAWN
GAME AREA
FUTURE PLAY AREA
STAGE
MTA PLAZA
COMMUNITY TERRACE
SLOPED LAWN
FLAG GARDEN
BROADWAY TERRACES
MARKETPLACE
EVENT LAWN
DOG RUN
STAGE
FRAMEWORK
PARALLEL WALKS
CITY SIDEWALK
PARK EDGES
CROSSWALKS
MERIDIAN BAND
MERIDIAN PATH

Fig. 10 below right and opposite

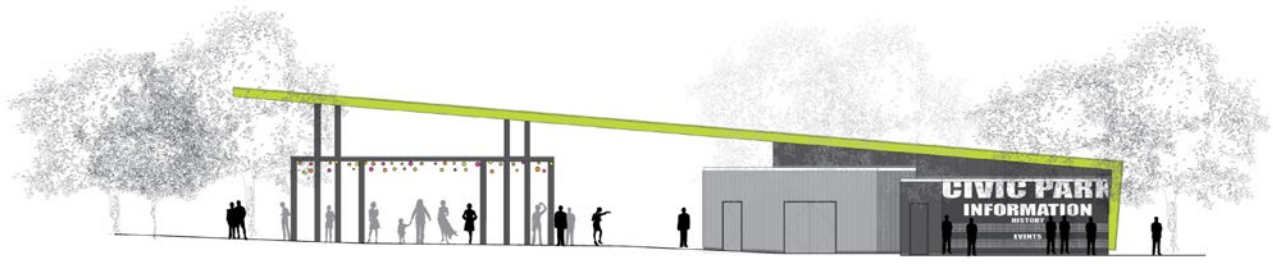
All of these sustainability strategies are remarkably put into place above the retained subterranean parking lots. This is most dramatically illustrated on the architect's section through the park (Fig. 10).

Above the landscaping works a programme of architecture was required to support and provide services to the numerous anticipated visitors to the park. In the vicinity of the Fountain Plaza new park buildings constructed under a sloping roof accommodate public restrooms, a park office, an elevator and retail space (Fig. 11).

In the vicinity of Spring Street and the vast Event Lawn another new park building (Figs. 12, 14, 15) provides a covered outdoor space, a green room for performers and public restrooms. The Event Lawn (Figs. 15, 16) occupies the full width of the park between the North and South promenades, with paved connections linking the dog run (north side) (Fig. 13) and the Marketplace (south side), ensuring that the diverse needs of farmers selling produce, and canines requiring vigorous exercise are all provided for. The architect's carefully considered placement of Grand Park's considerable facilities ensure that the Park for Everyone lives up to its aspirational motto.



NORTH ELEVATION



SOUTH ELEVATION

Fig. 13. above | Fig. 14. below

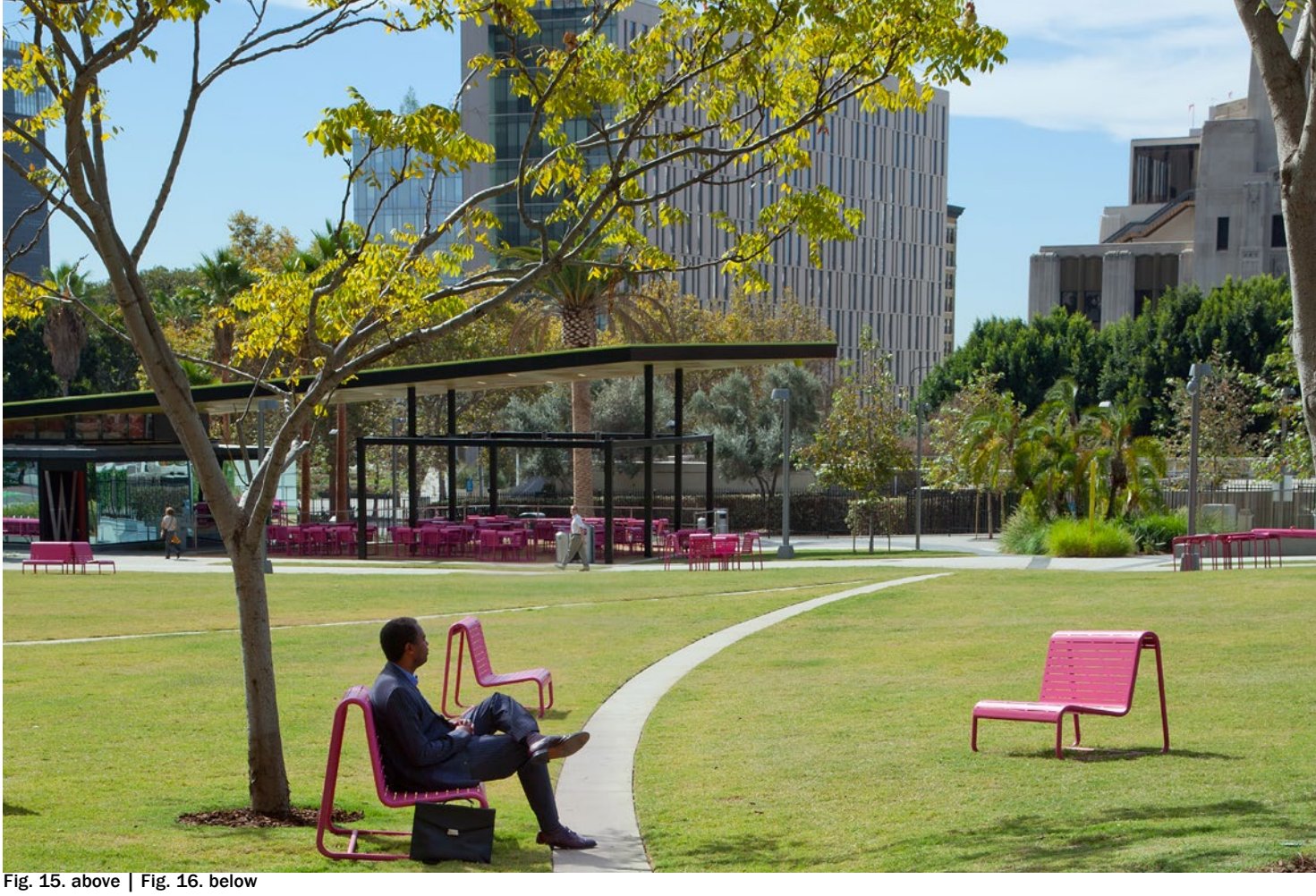


Fig. 15. above | Fig. 16. below