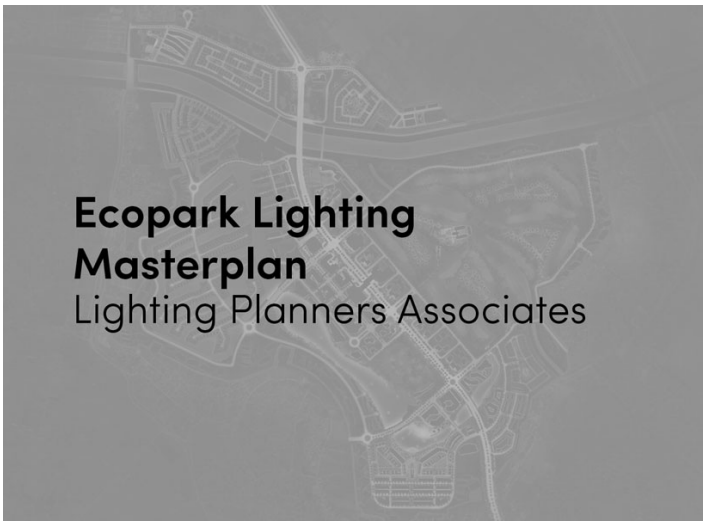

ECOPARK LIGHTING MASTERPLAN: AN ECOLOGICAL LIGHTING ENVIRONMENT WITH NO LIGHT POLLUTION

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Categories: Energy and sustainability, Essay, expanding design practices, Lighting Planners Associates, Middle Density

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The “Ecopark” development, with a surface area of about 500 hectares, is located about 20 km from the center of Hanoi city. Ecopark is currently among the largest urban development projects in Northern Vietnam. Various facilities such as high-rise residential apartments, office / commercial buildings, a central business district, university buildings, and golf courses have been planned for the rich natural environment of greenery and water.

Lighting Planners Associates (LPA) was engaged to create a Lighting Masterplan to meticulously orchestrate a night life for both people and nature in Ecopark. The challenge of the project was to envision the evolution of the lighting environment in Ecopark over the next 20 years. In order to envision a clear image of the Ecopark nightscape in 20 years, the concept and strategies of the lighting plan needed to be clearly established by the project team.

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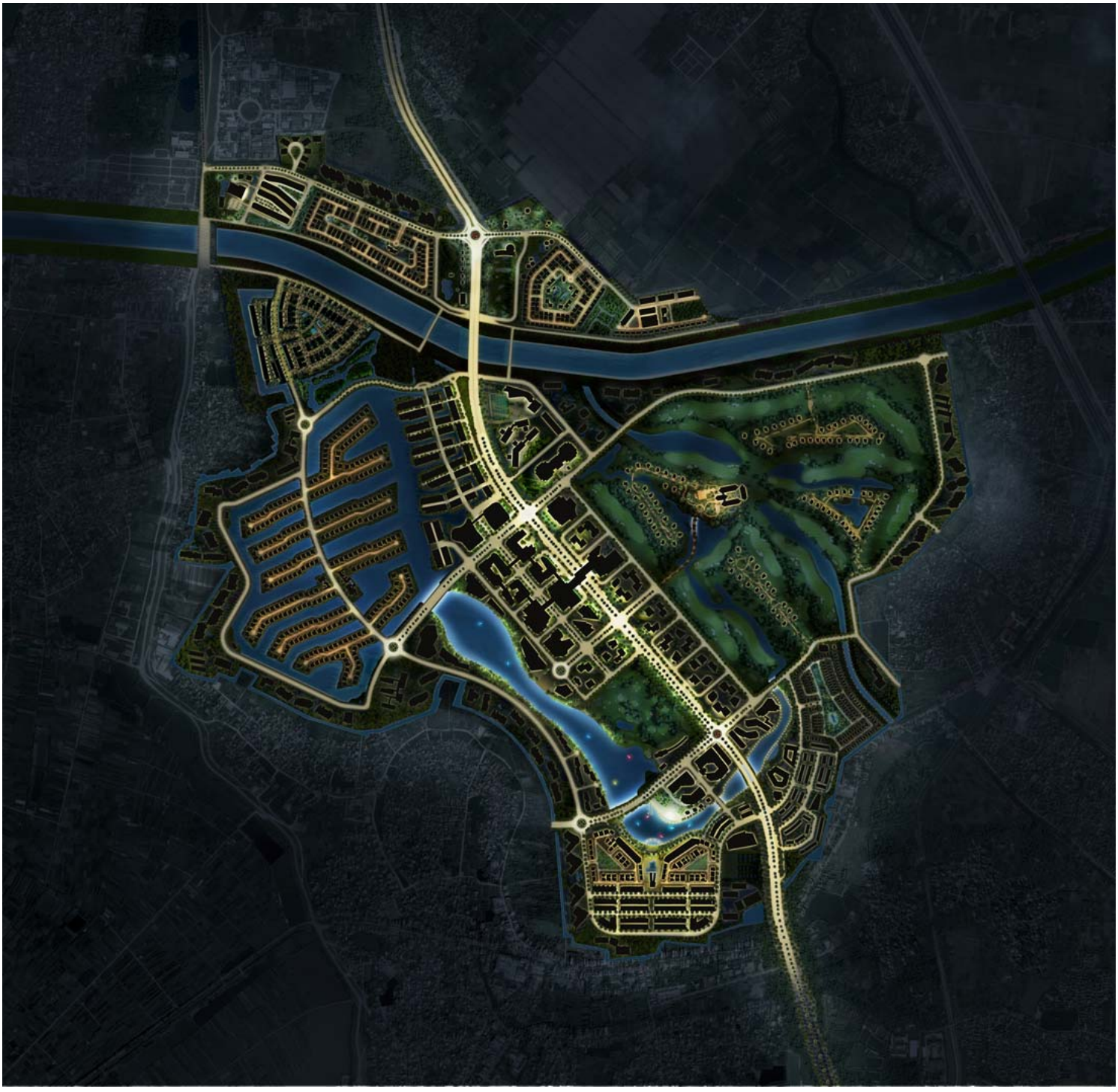

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LPA proposed “an ecological lighting environment without any light pollution” as the core concept. Developed cities around the globe are filled with unnecessary and obstructive light, referred to as light pollution. We aim to minimize light pollution: the whole development would be surrounded by light that is beautiful and gentle, both for the environment and for Ecopark residents.

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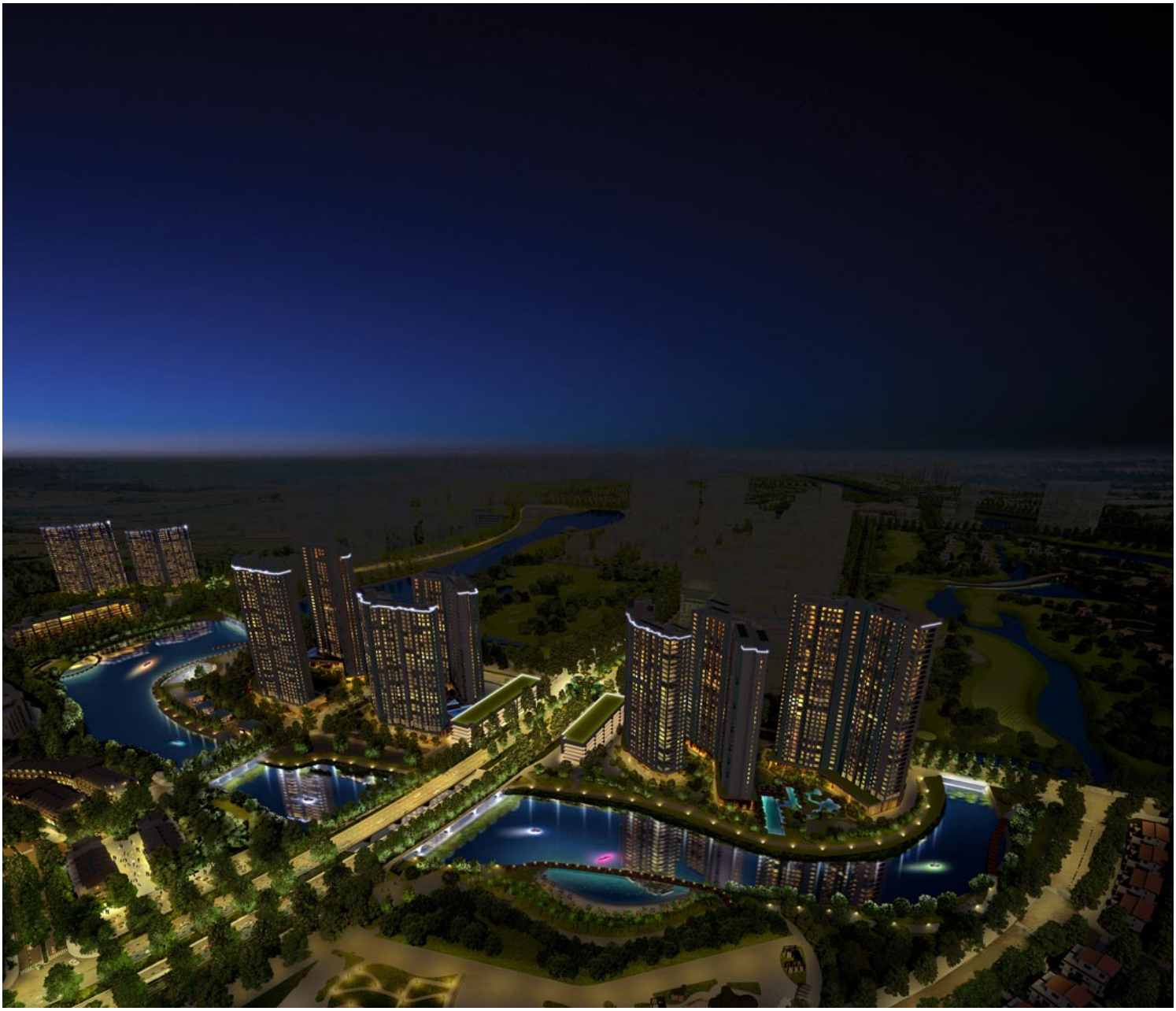

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To give Ecopark a strategically unique character, LPA proposed three key lighting approaches that would be reflected as a dynamic nightscape; 1) greenery and waterscape; 2) tradition integrated with modern technology; and 3) picturesque postcard nightscape.

With the abundance of green river-edge pedestrian walkways throughout the entire development, there was a need to create a comfortable balance of light and darkness while adhering to safety requirements. Tree uplights, bi-directional bollards and indicator lights were used to highlight the greenery, illuminate pedestrian walkways and create a distinctive reflection on the water's surface throughout the entire property.

The engagement of local traditional techniques and materials were also suggested by LPA to give a distinctive lighting element, integrated with modern lighting technology. The use of ceramic, rattan or bamboo in fixtures lining the landscape can evoke the experience of "visual stories" and a sense of temporality with the occasional punctuation along the streets.

Control of road illumination levels, color temperature in both streetscapes and landscapes, and unique architectural features were among some of the tactical challenges faced in this study, which evolved into technical lighting guidelines to create a quality nightscape.

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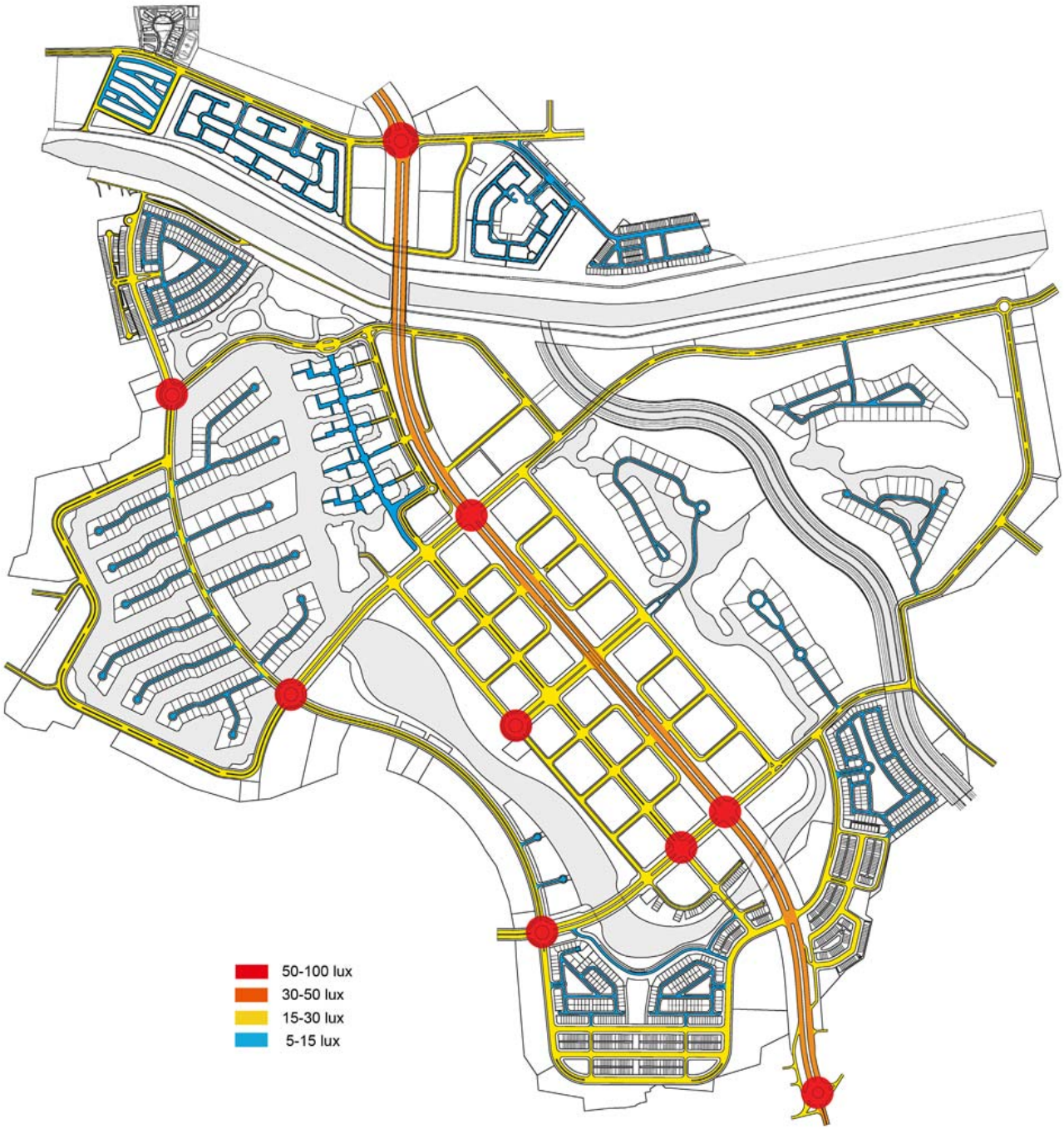

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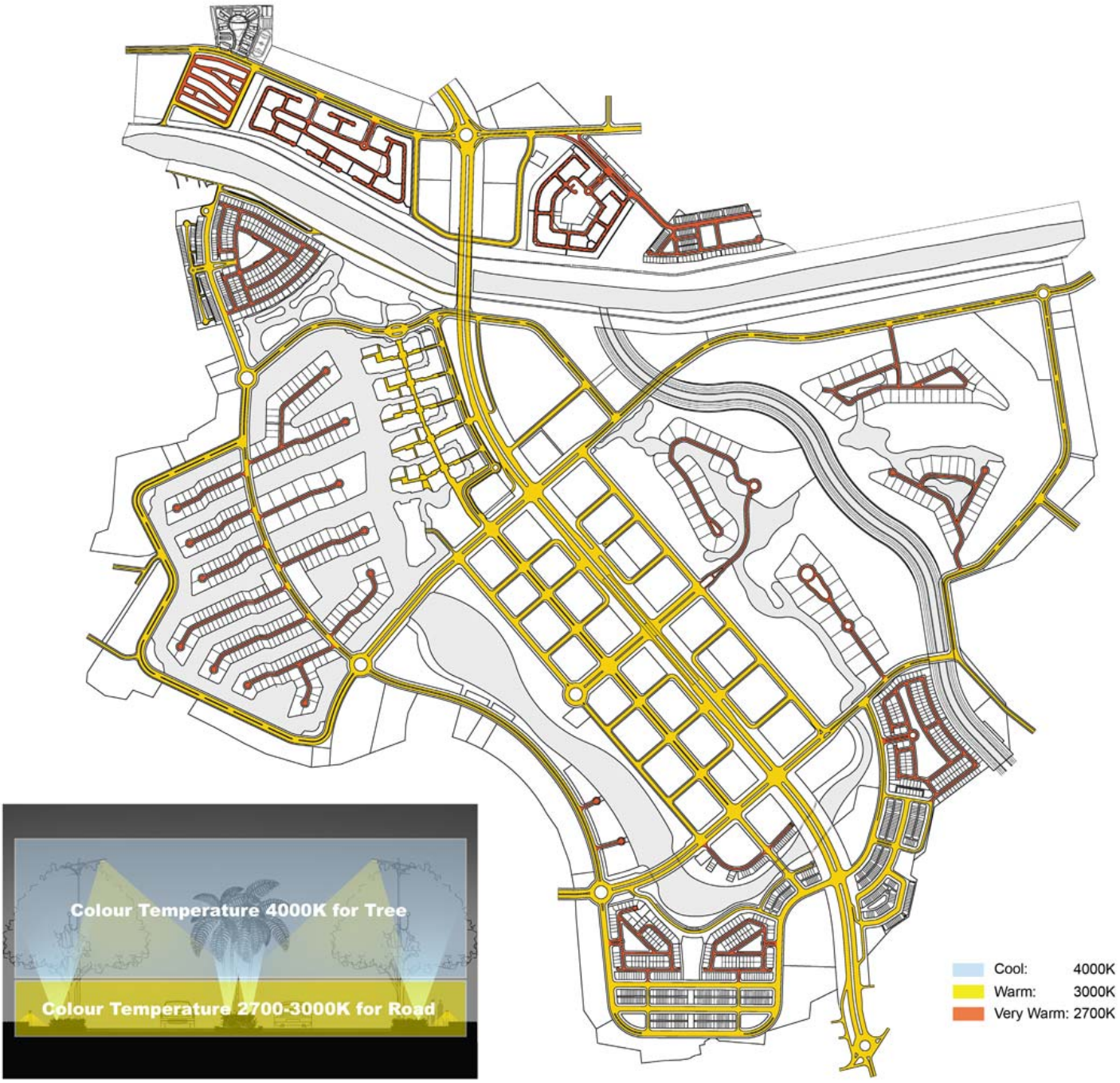

Particular attention was paid to controlling the glare issue in road illumination throughout

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commercial, intermediate and residential areas. Lighting for the main road that traverses the site also had to be carefully considered for glare, as well as light pollution. Visual lighting mock-ups for street lighting were organized by LPA with the owner, and the engineering team shared and promoted understanding about the required lighting quality for Ecopark.

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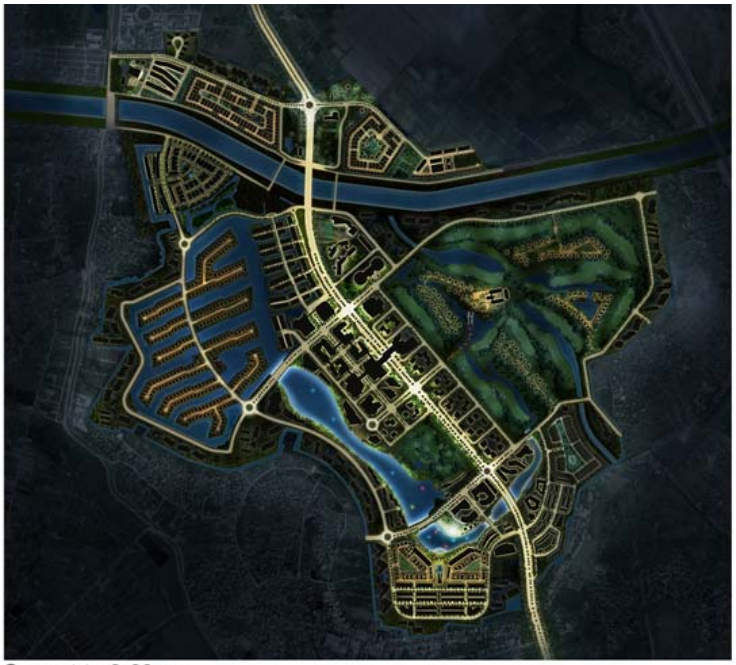
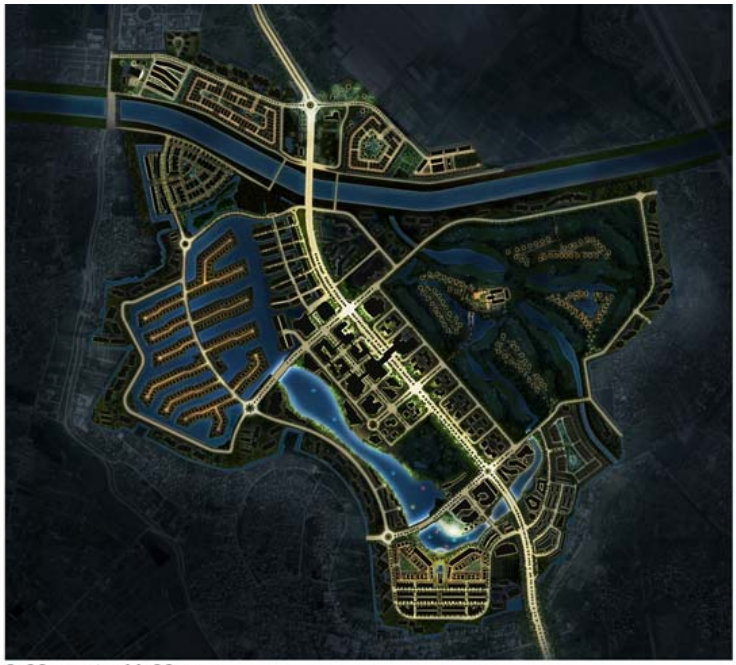
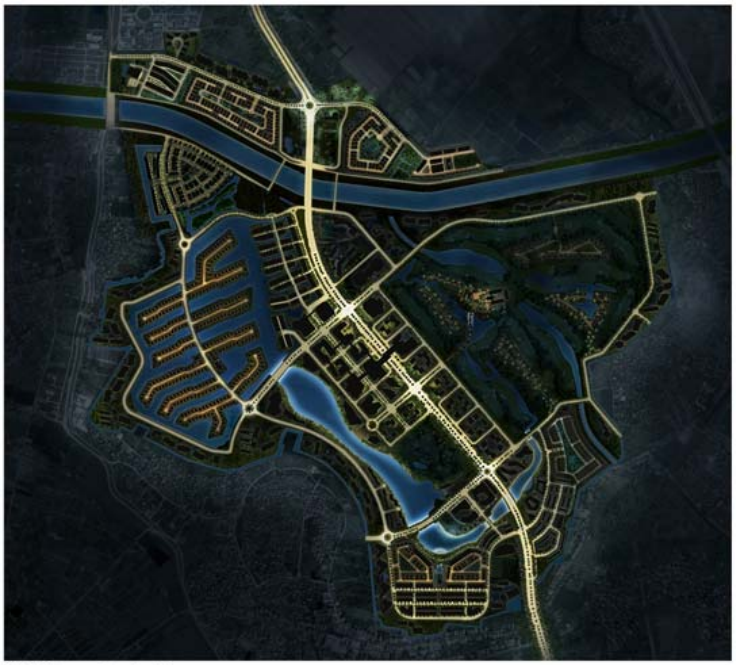


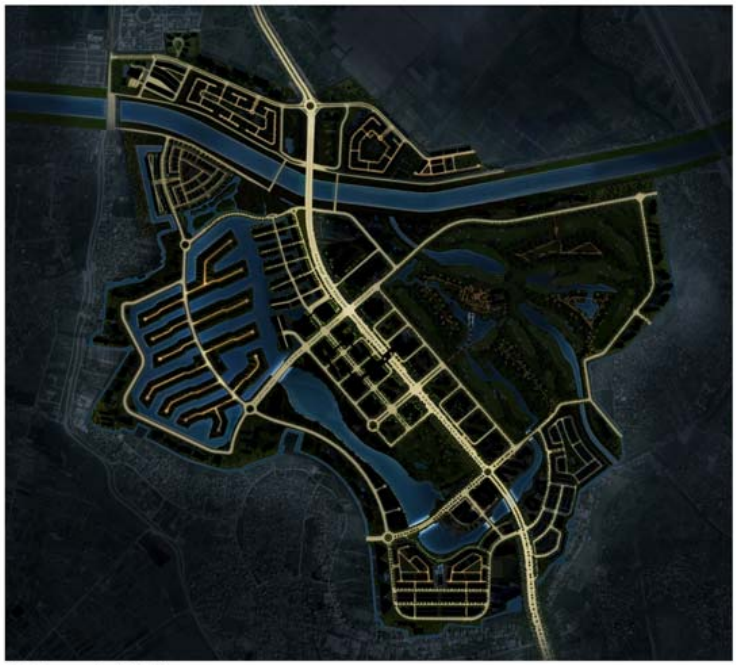
Sunset to 9:00 pm



9:00 pm to 11:00 pm



11:00 pm to 1:00 am



1:00 am to 7:00am

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Following this vision, LPA proposed additional detailed lighting strategies for Phases 1 through 8, which included the park-river, golf course, central business district, residential area, redevelopment of the Palm Springs district, and so on.

The Ecopark Lighting Masterplan will aid in the creation of a first-class nightscape and is set to be regarded as the pioneer in the new generation of ecological lighting design.

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