

THE BARNES FOUNDATION

Lighting Schematic/Initial Design

Joe Brenner

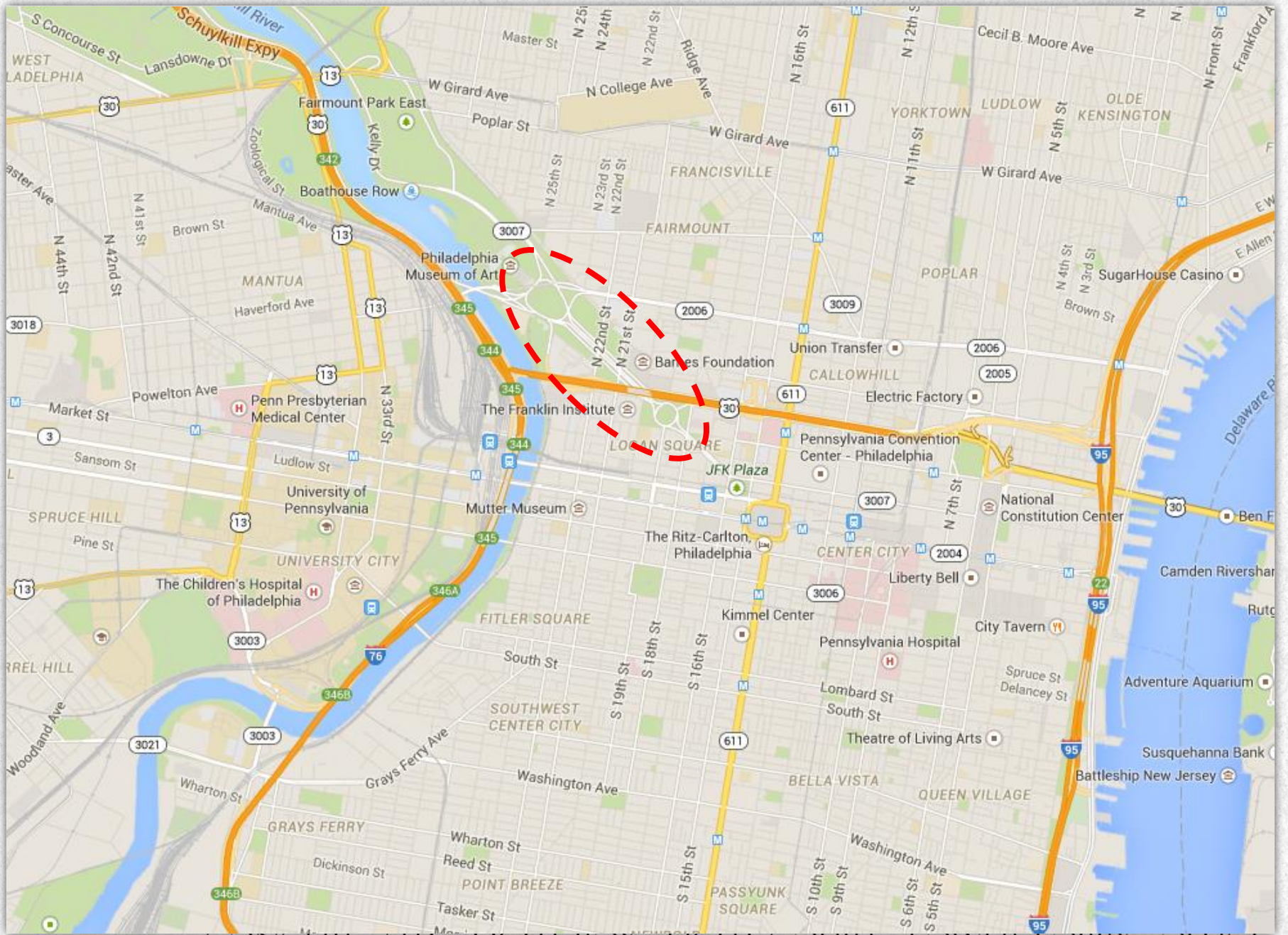


BUILDING STATISTICS

Location	Philadelphia, PA
Size	91,748 ft ²
Occupancy	Assembly (A-3), Business
Cost	\$75,890,374
Delivery	Guaranteed Maximum Price

PROJECT TEAM

Architect	Tod Williams and Billie Tsien Architects
Lighting Designer	Fisher Marantz Stone



OVERVIEW

CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

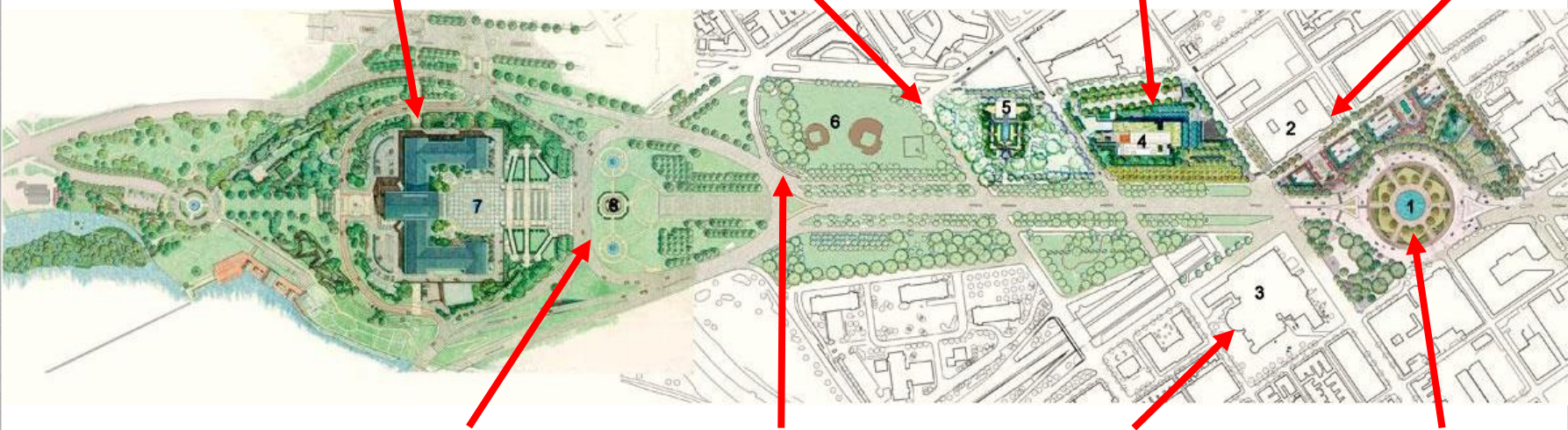


BARNES FOUNDATION

Philadelphia Museum of Art

Rodin Museum

Free Library

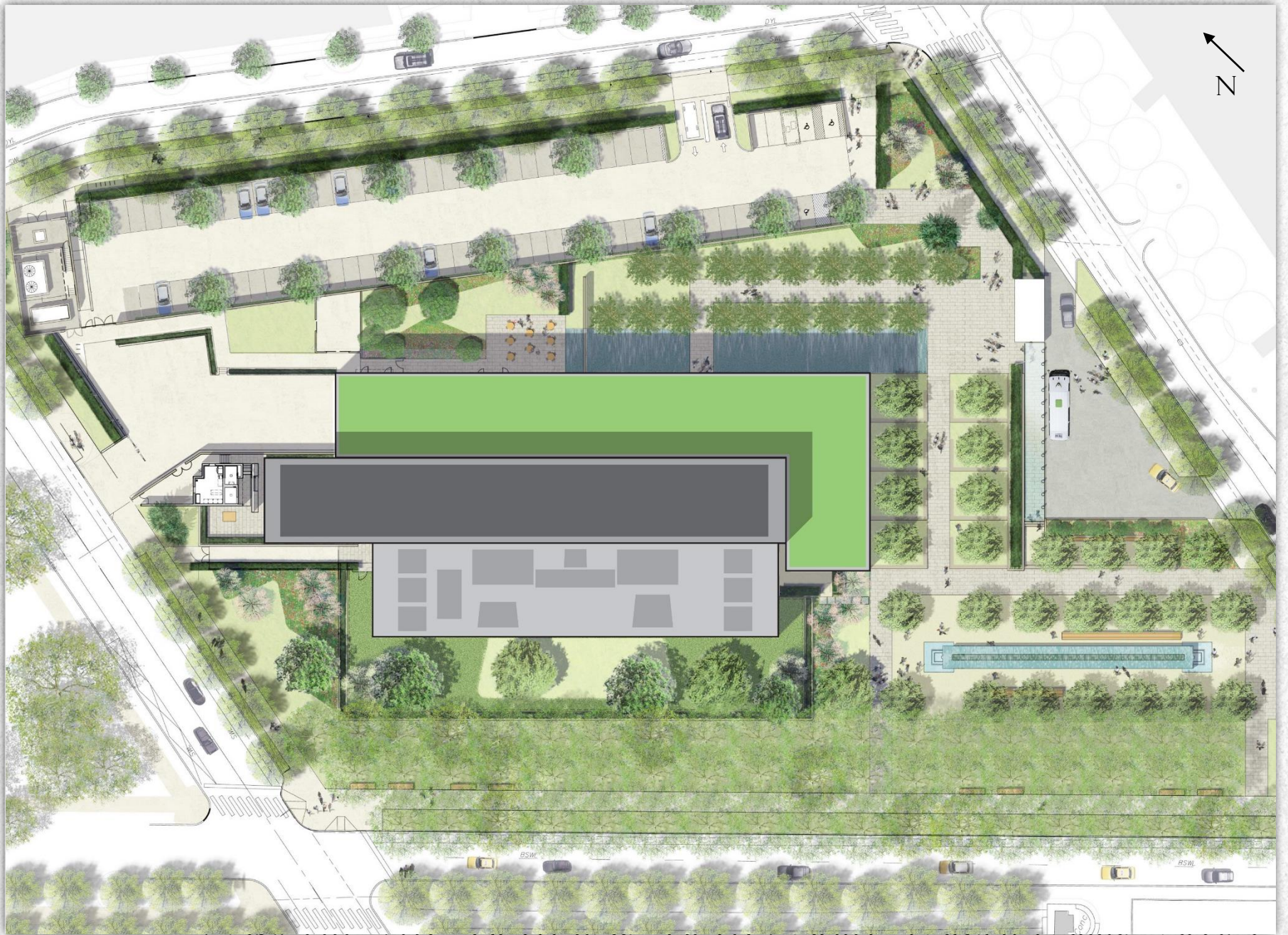


Eakins Oval

City Baseball Fields

Franklin Institute

Logan Square



OVERVIEW

CONCEPT SITE

LIGHT BOX

LIGHT COURTYARD

LOWER LOBBY

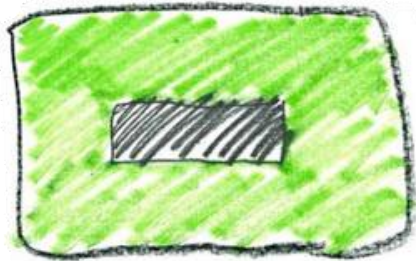
OFFICE



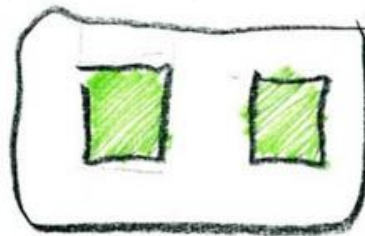
DR. ALBERT C. BARNES
1872 - 1951

“To promote the advancement
of education and the
appreciation of fine arts”





gallery in a
garden



garden in a
gallery



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



EROSION

OVERVIEW

CONCEPT

SITE

LIGHT BOX

LIGHT COURT

LOWER LOBBY

OFFICE



OVERVIEW

CONCEPT

SITE

LIGHT BOX

LIGHT COURT

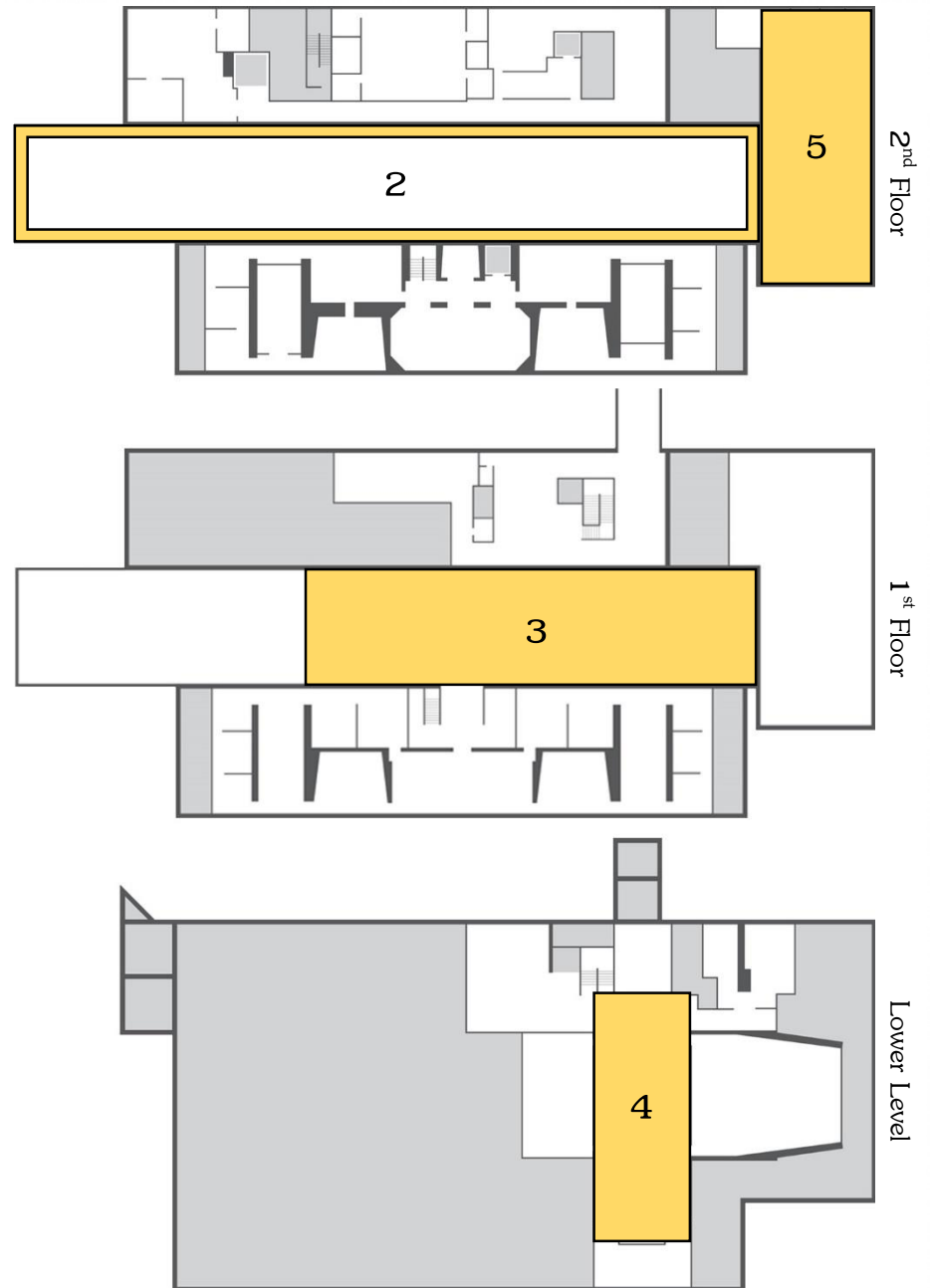
LOWER LOBBY

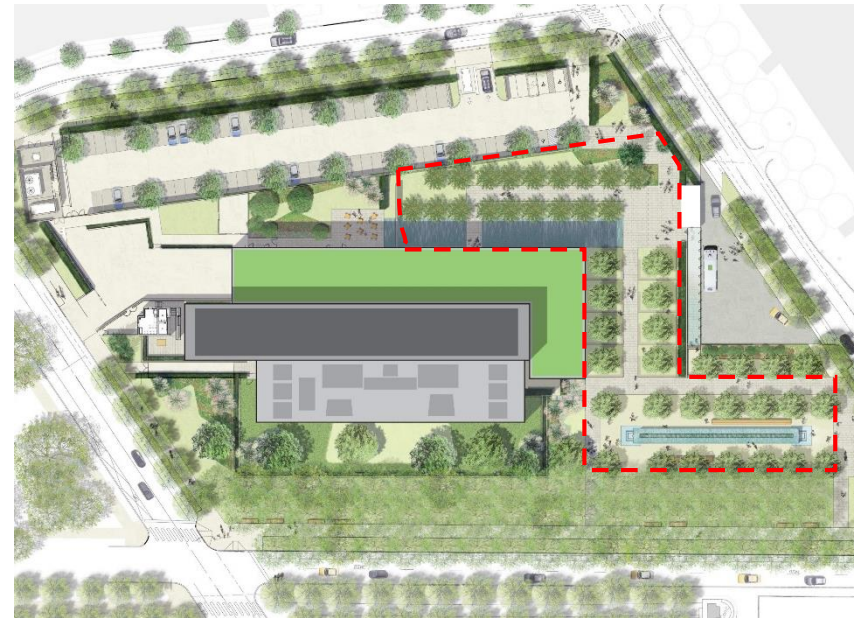
OFFICE



AREAS OF STUDY

1. Site
2. Light Box
3. Light Court
4. Lower Lobby
5. Open Office





OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

PLAZAS

$$\text{LPD} = 0.2 \text{ W/ft}^2$$

$$E_H = 4 \text{ fc}$$

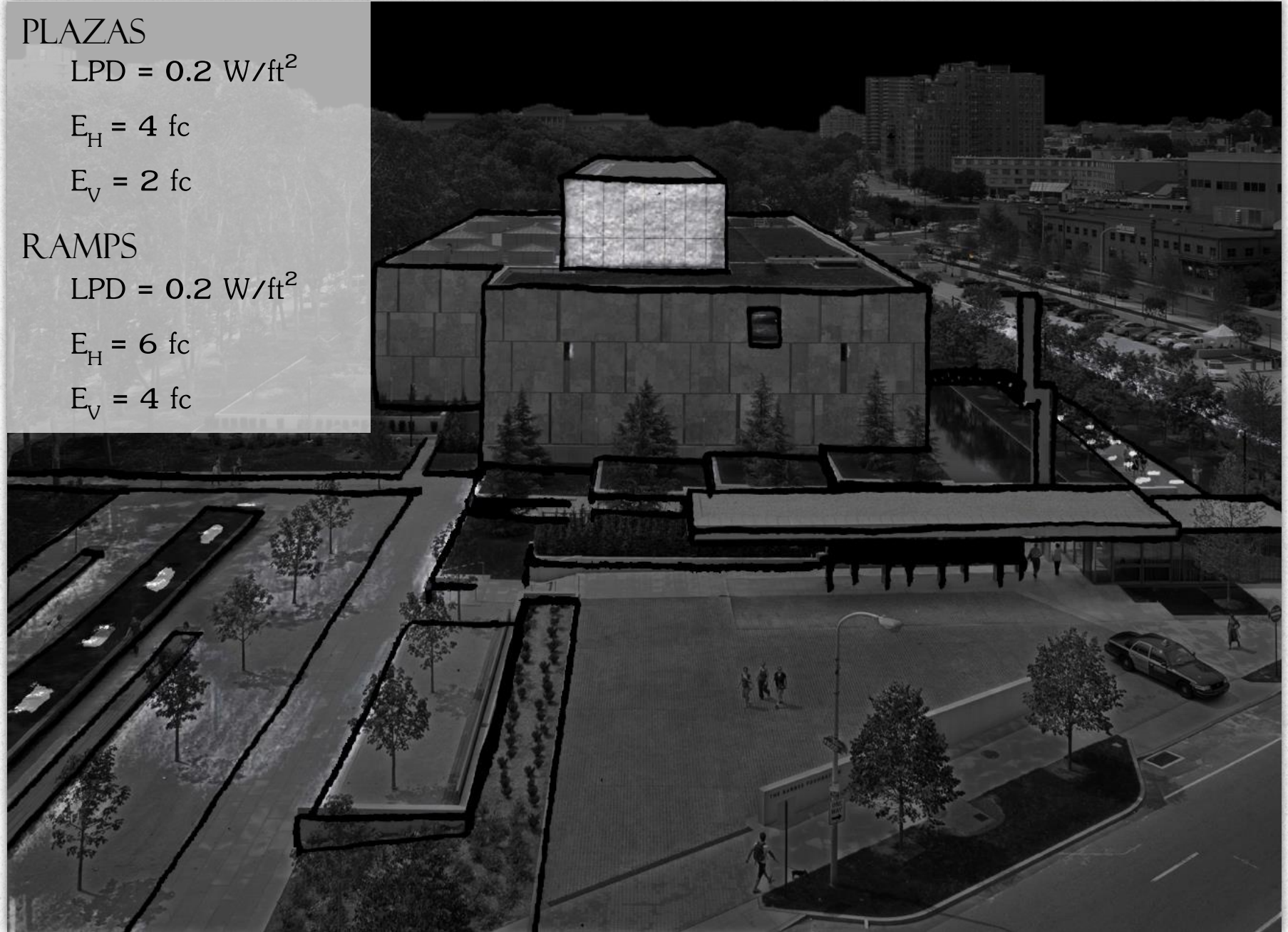
$$E_V = 2 \text{ fc}$$

RAMPS

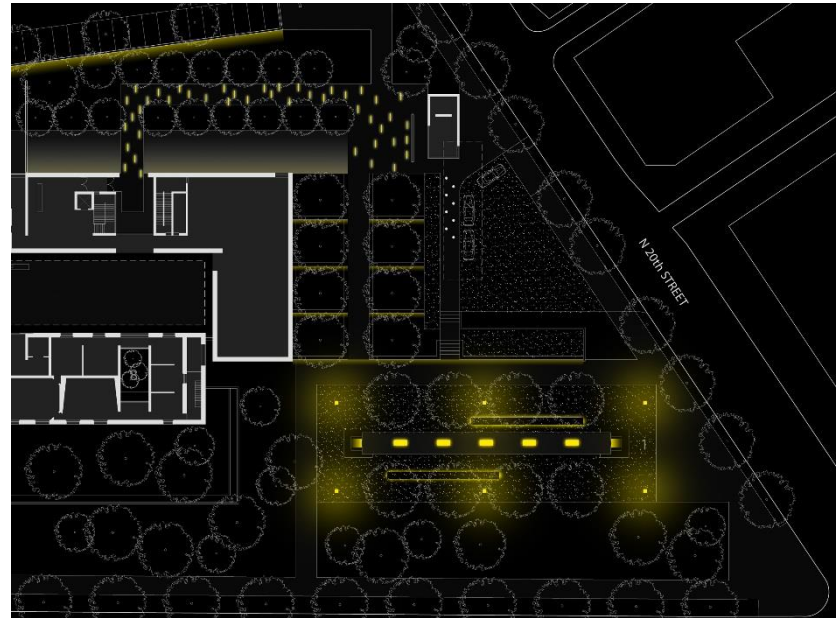
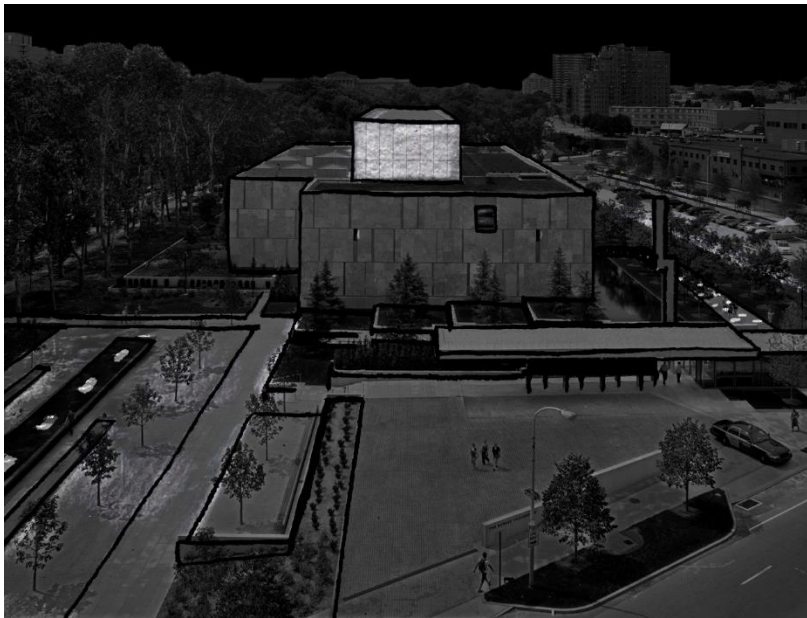
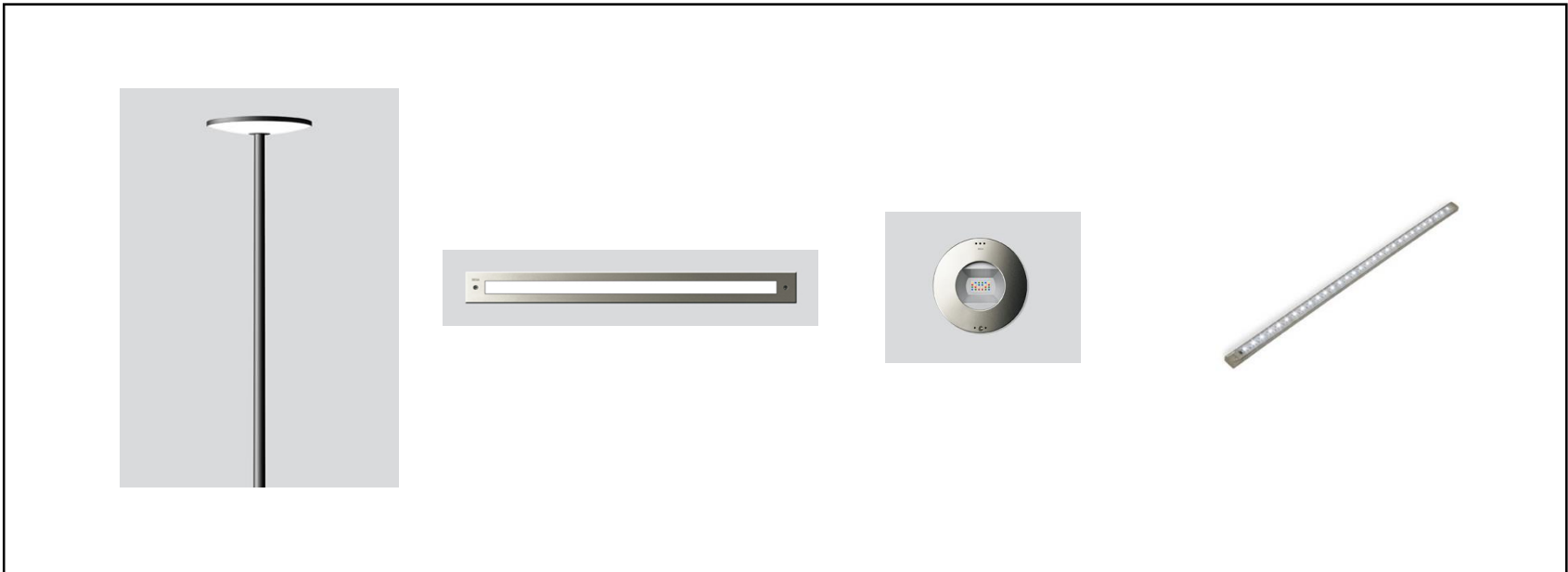
$$\text{LPD} = 0.2 \text{ W/ft}^2$$

$$E_H = 6 \text{ fc}$$

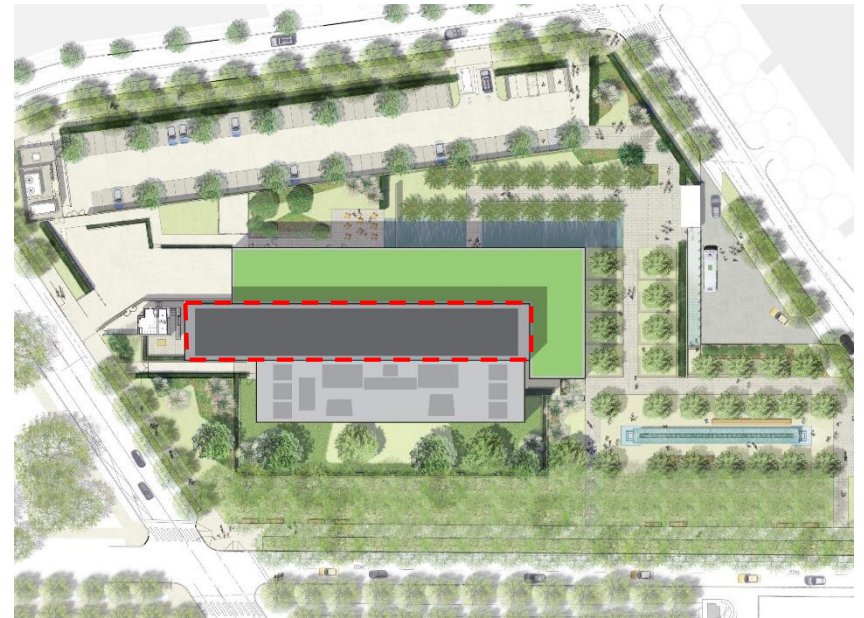
$$E_V = 4 \text{ fc}$$



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



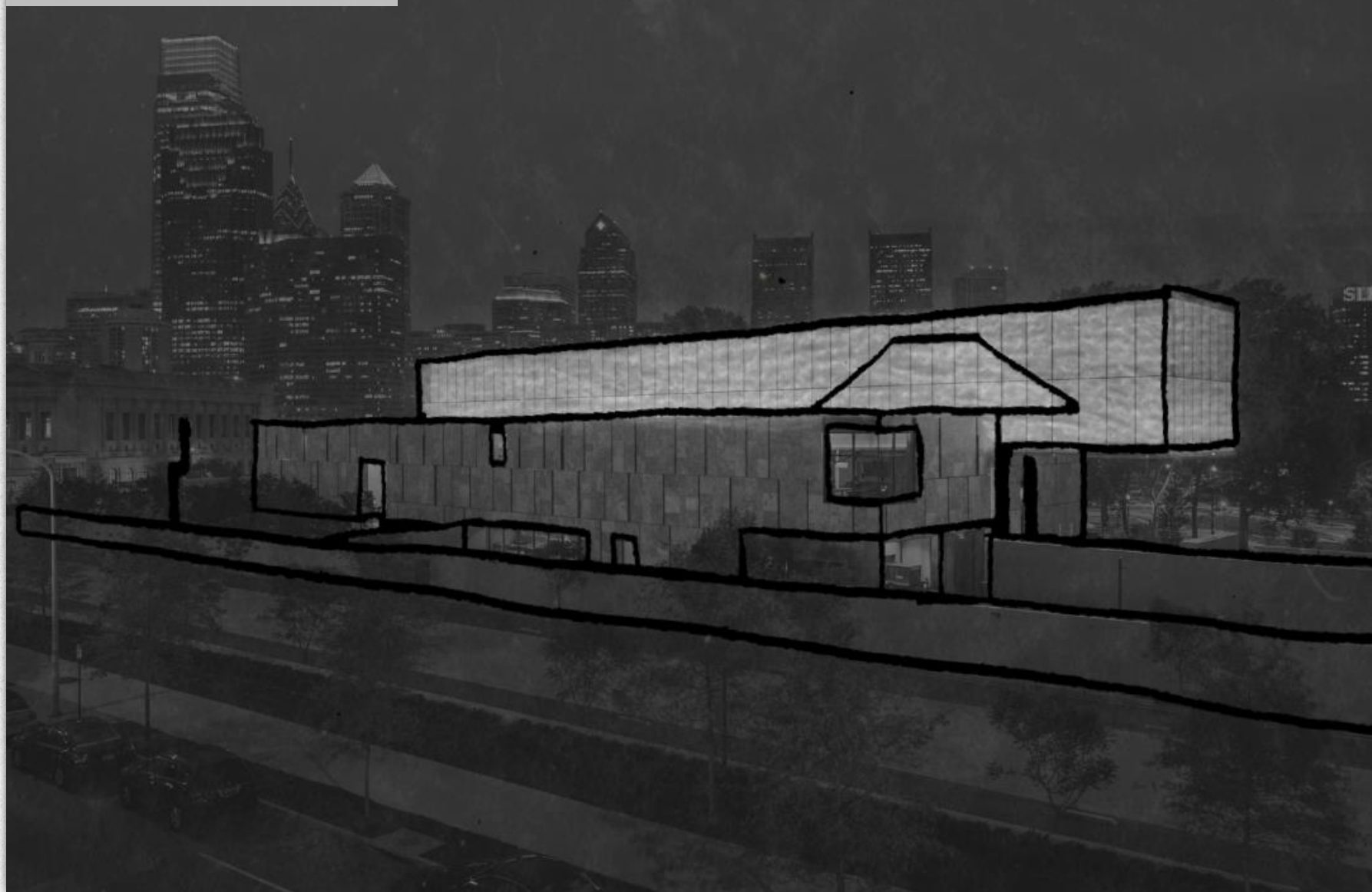
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



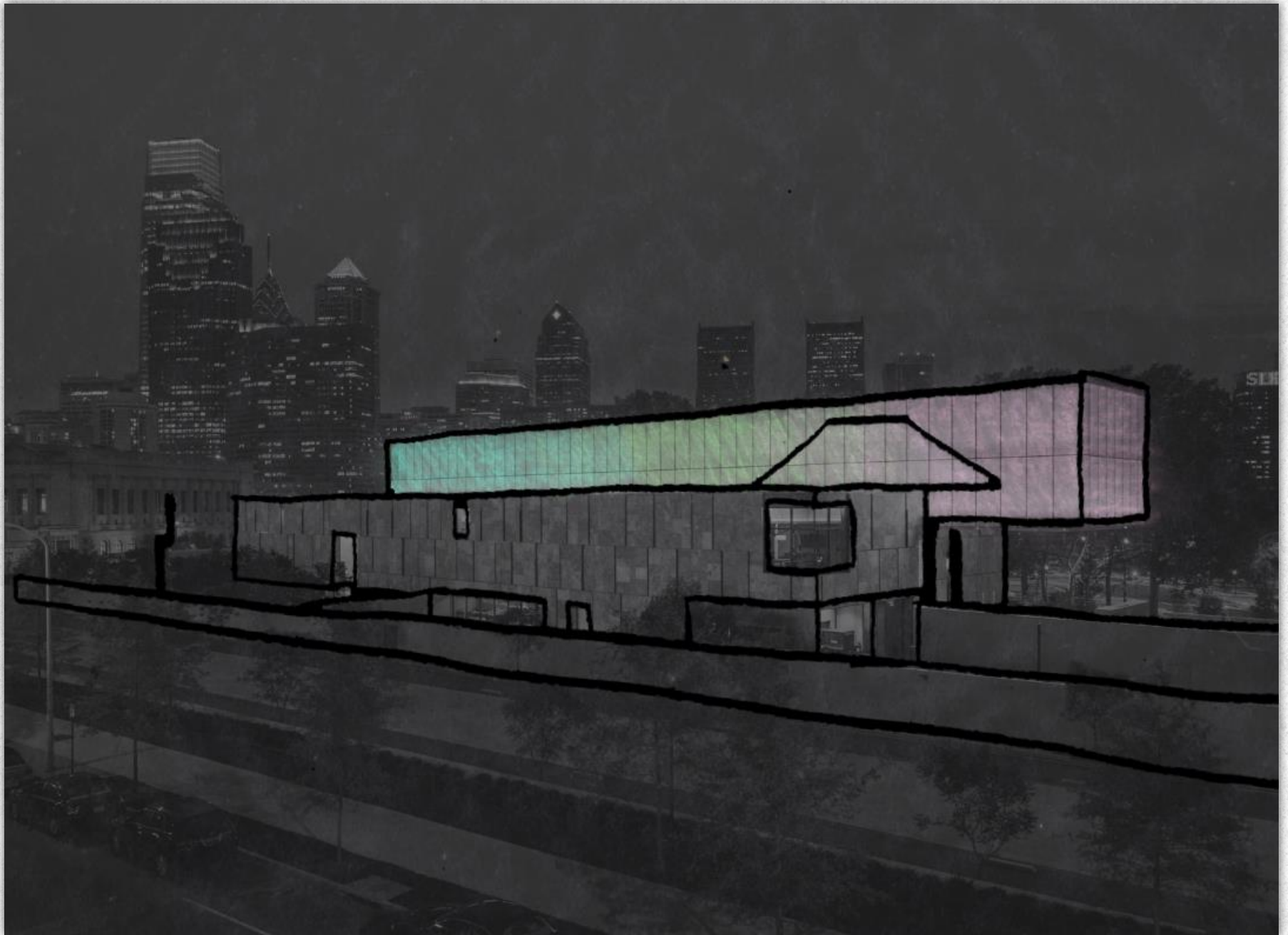
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

DESIGN CRITERIA

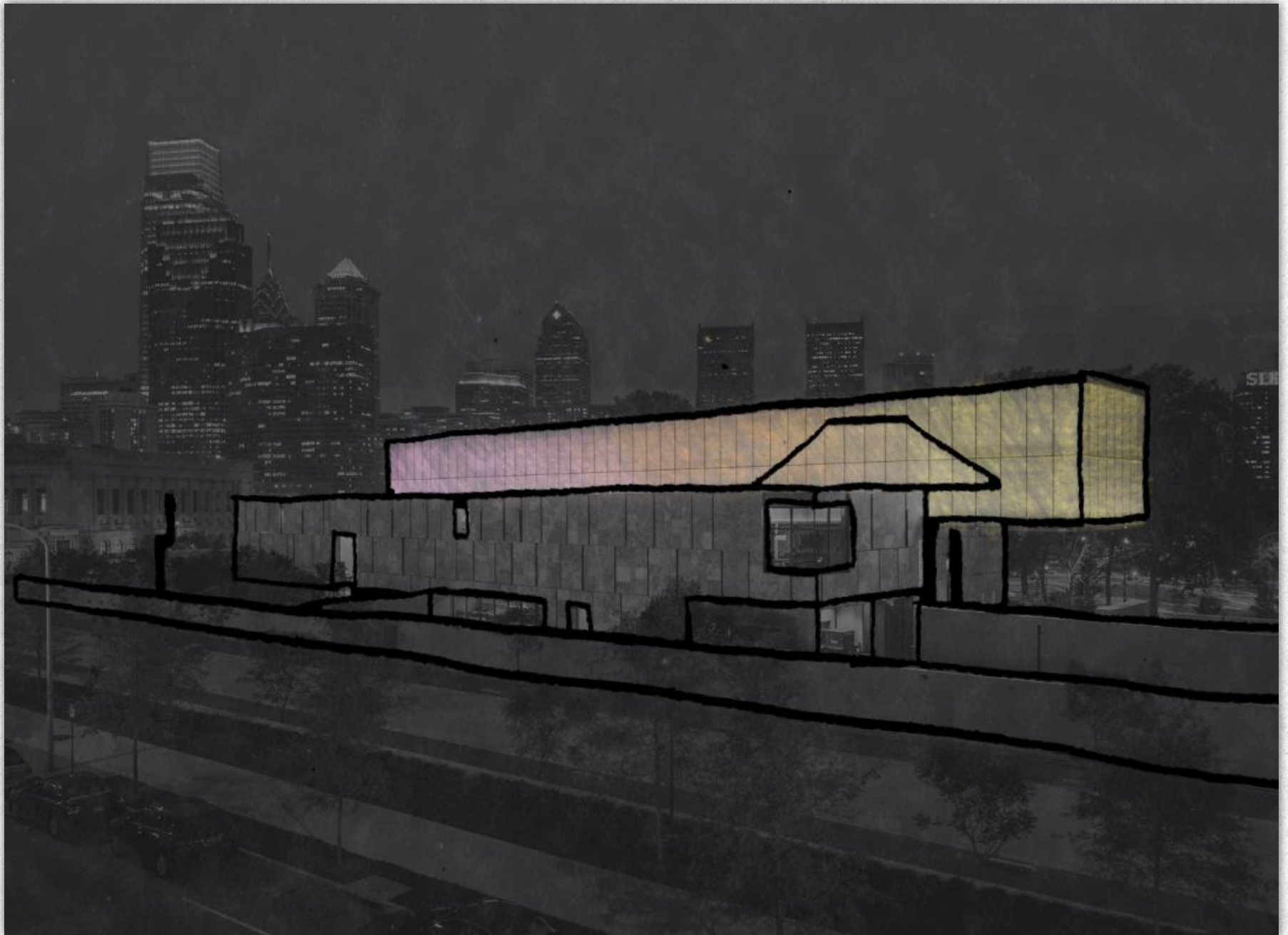
$$E_v = 30 \text{ cd/m}^2$$



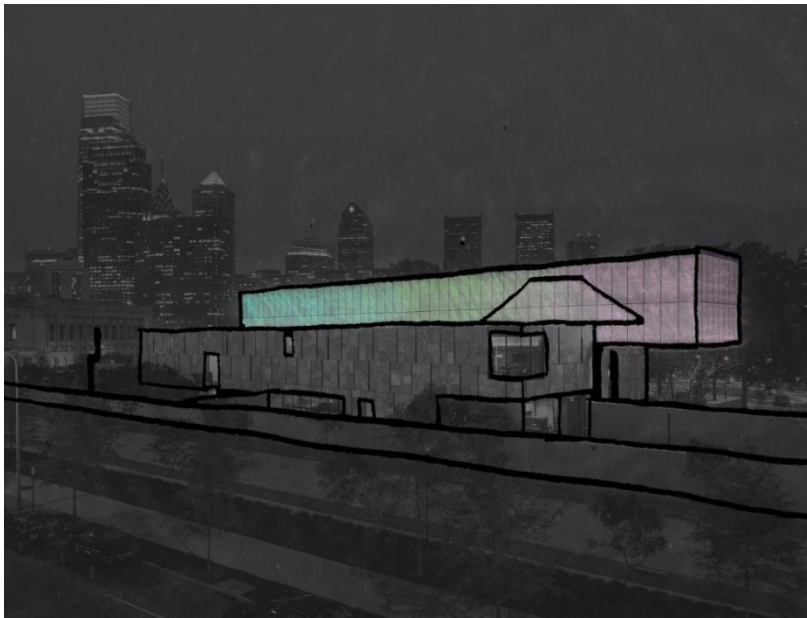
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

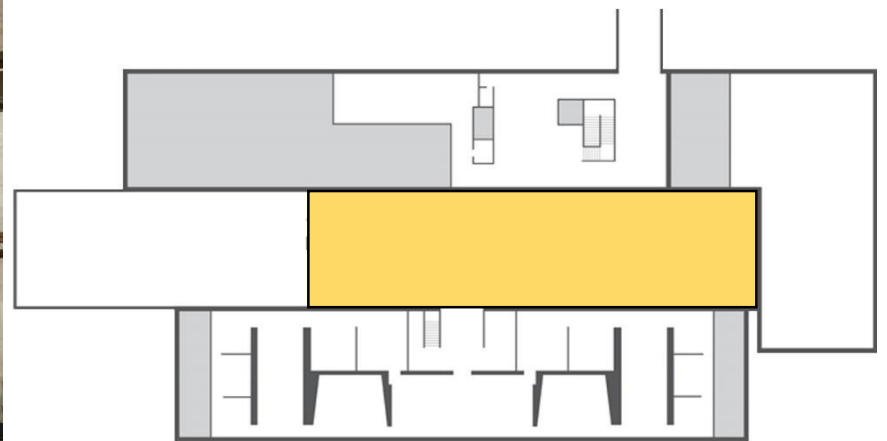
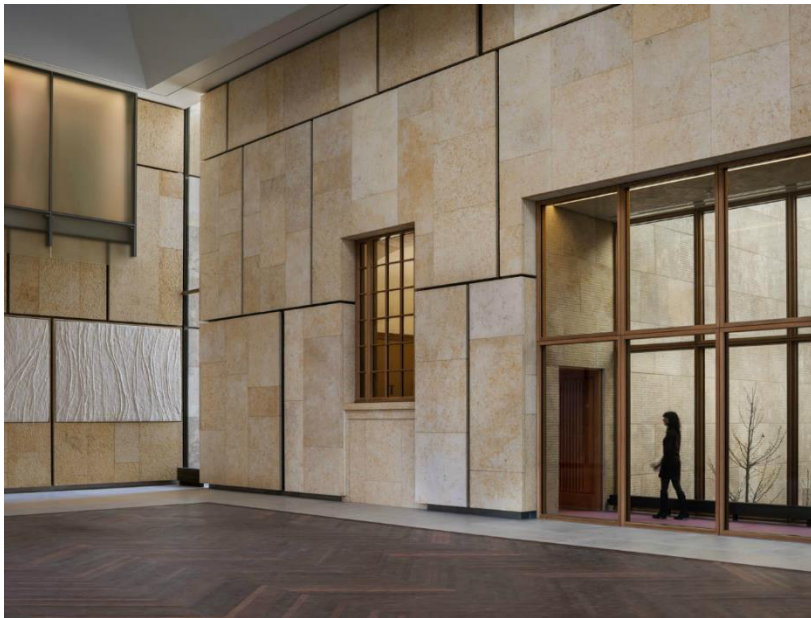


OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE





OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

DAY

$$\text{LPD} = 1.65 \text{ W/ft}^2$$

$$E_H = 10 \text{ fc}$$

$$E_V = 3 \text{ fc}$$

NIGHT

$$\text{LPD} = 1.65 \text{ W/ft}^2$$

$$E_H = 5 \text{ fc}$$

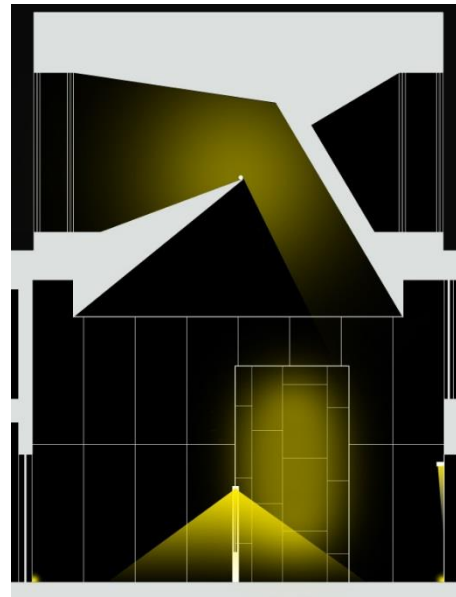
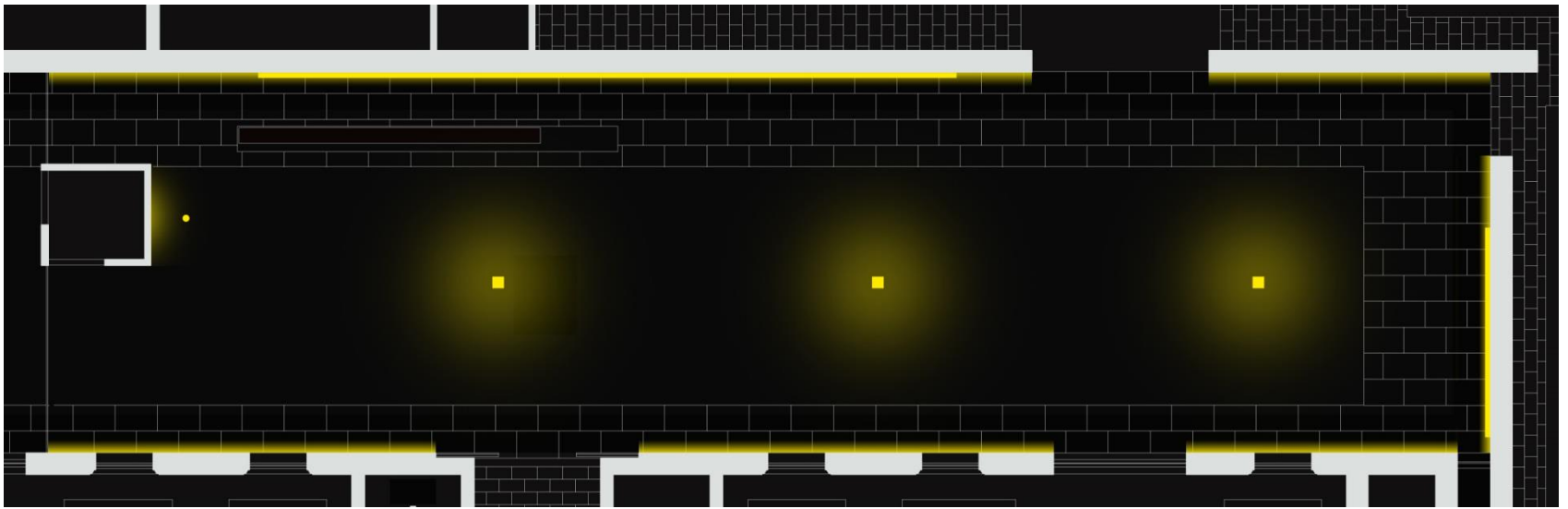
$$E_V = 2 \text{ fc}$$



OVERVIEW CONCEPT SITE LIGHT BOX

LIGHT COURT

LOWER LOBBY OFFICE



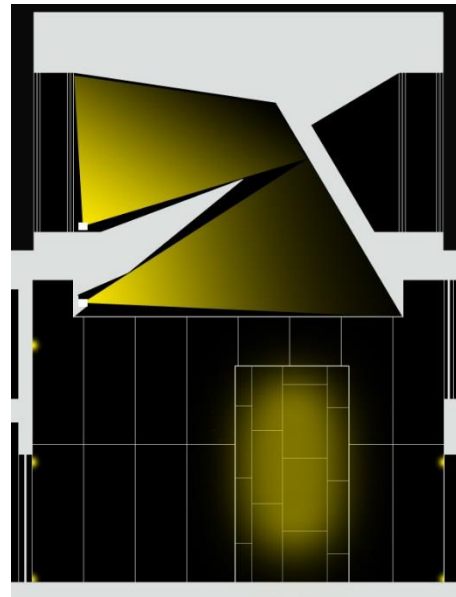
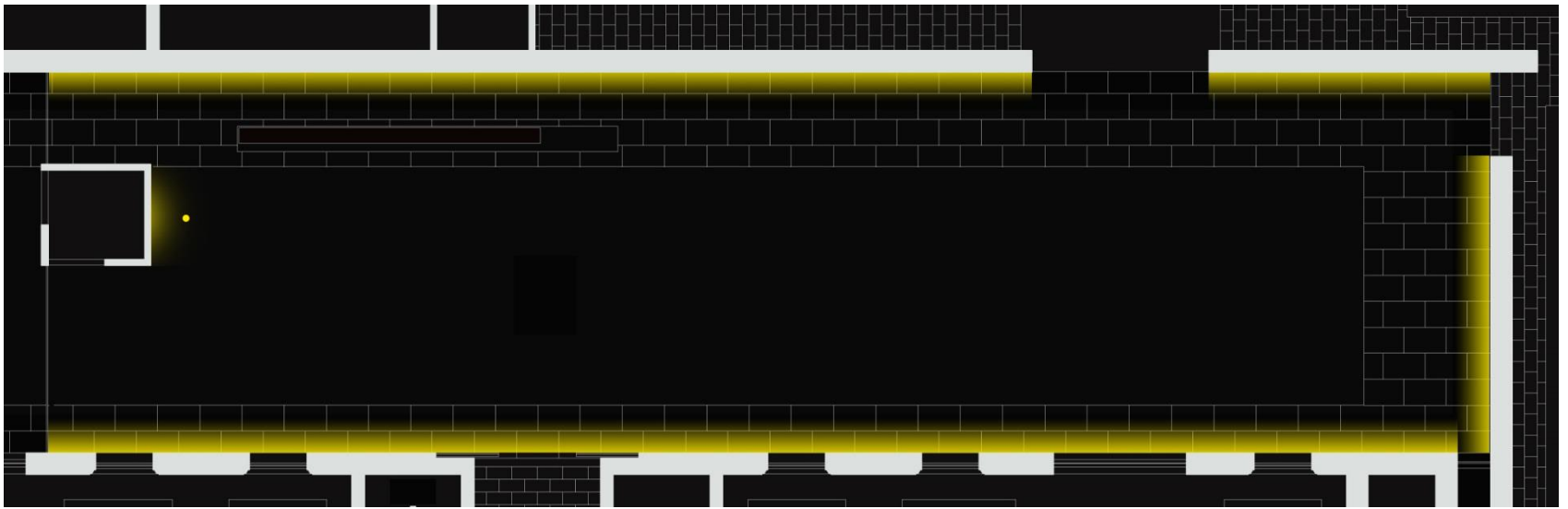
OVERVIEW CONCEPT SITE LIGHT BOX

LIGHT COURT

LOWER LOBBY OFFICE



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



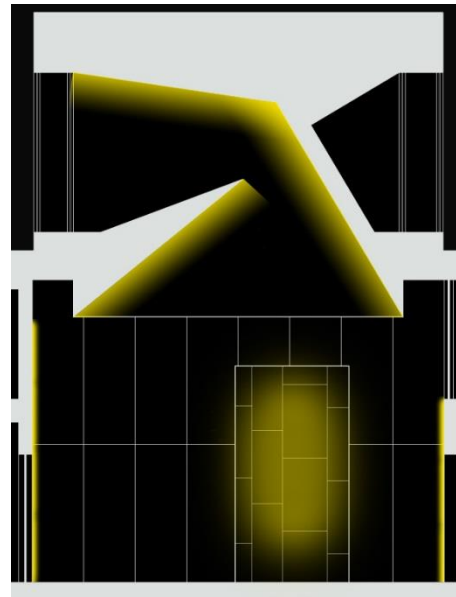
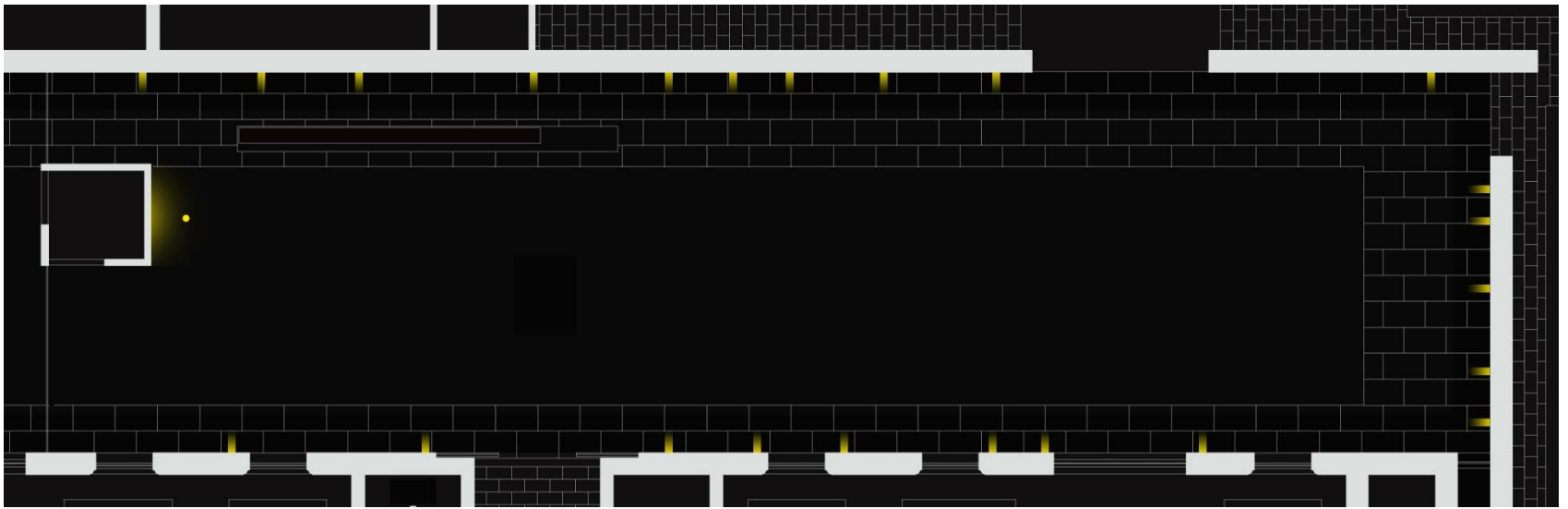
OVERVIEW CONCEPT SITE LIGHT BOX

LIGHT COURT

LOWER LOBBY OFFICE



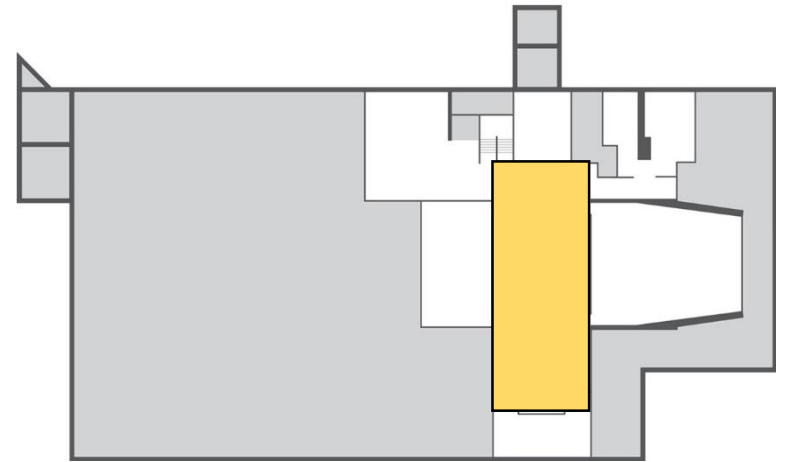
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



OVERVIEW CONCEPT SITE LIGHT BOX

LIGHT COURT

LOWER LOBBY OFFICE



OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE

DESIGN CRITERIA

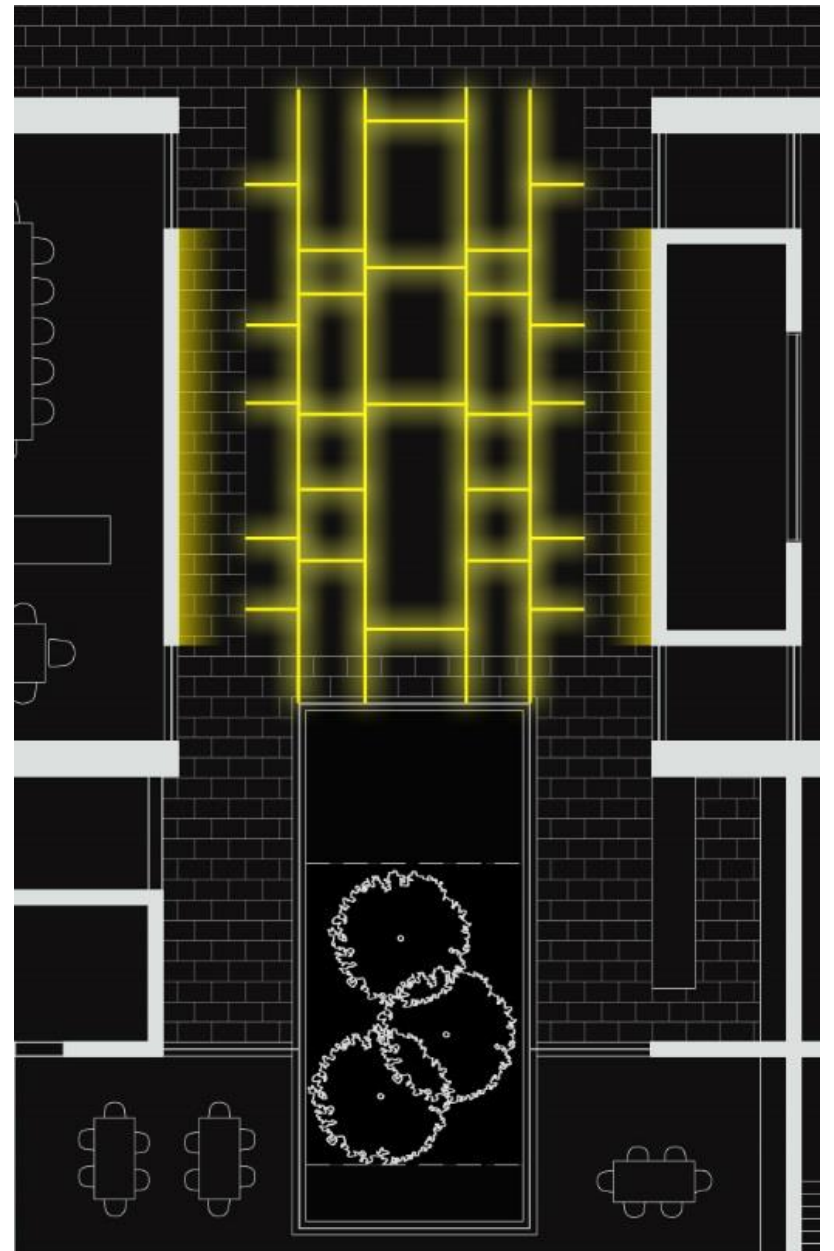
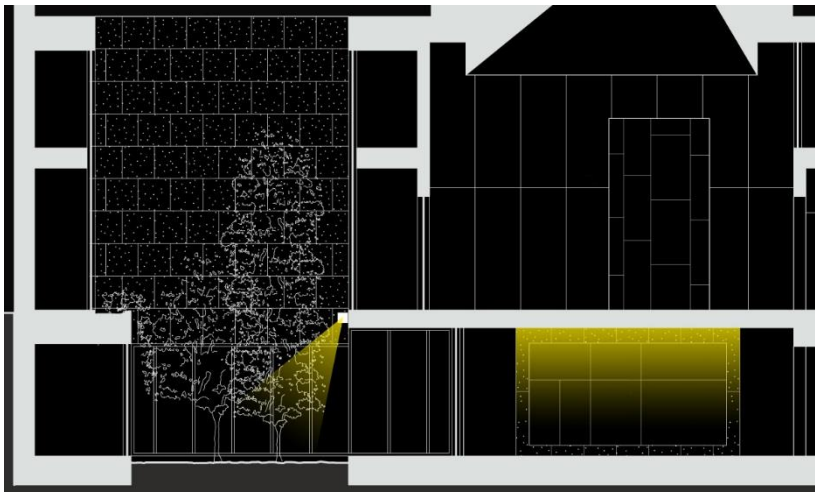
$$\text{LPD} = 0.9 \text{ W/ft}^2$$

$$E_H = 30 \text{ fc}$$

$$E_V = 15 \text{ fc}$$



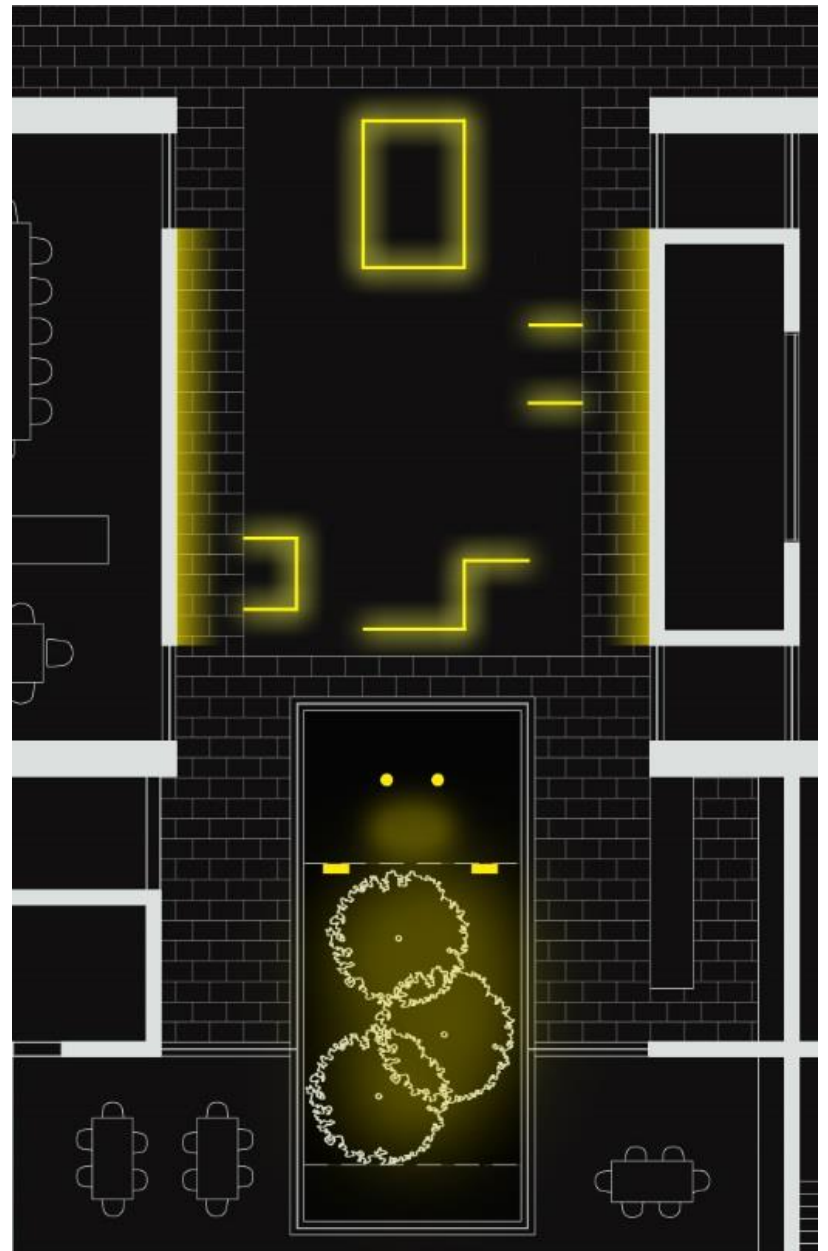
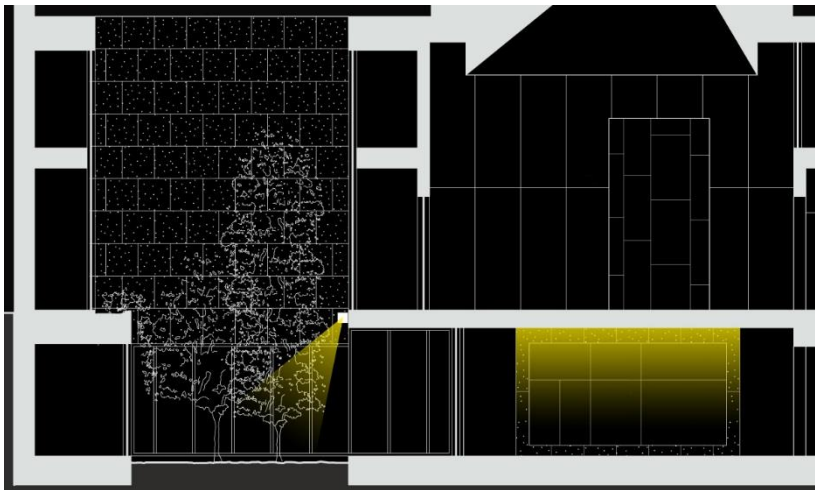
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



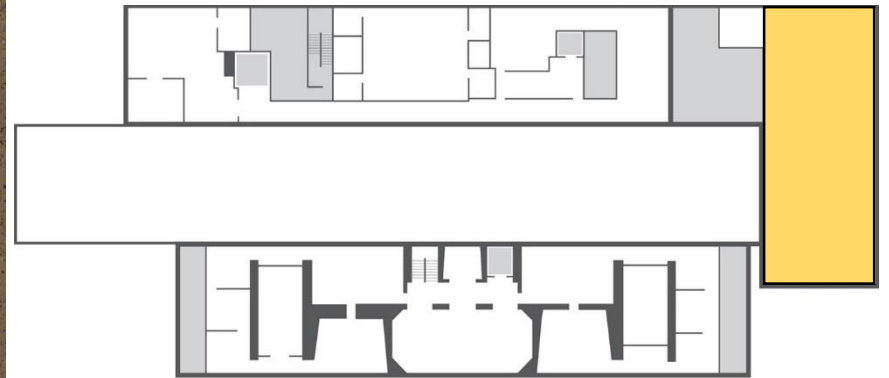
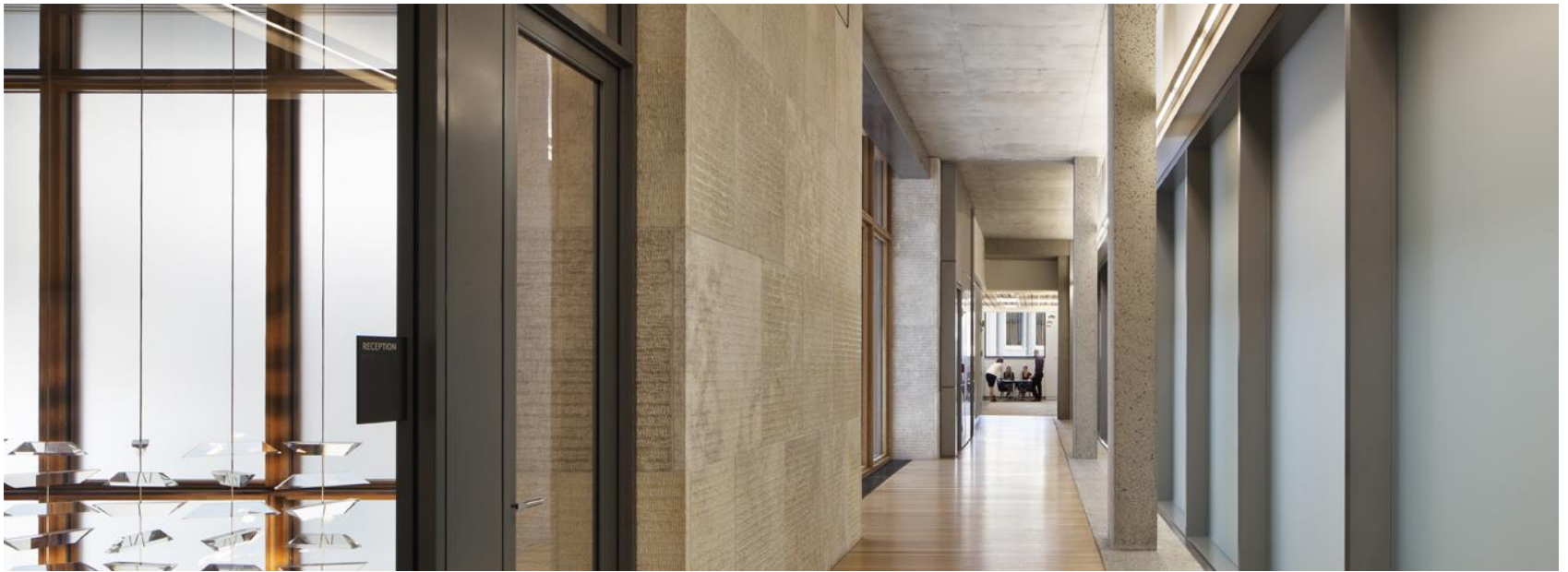
OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



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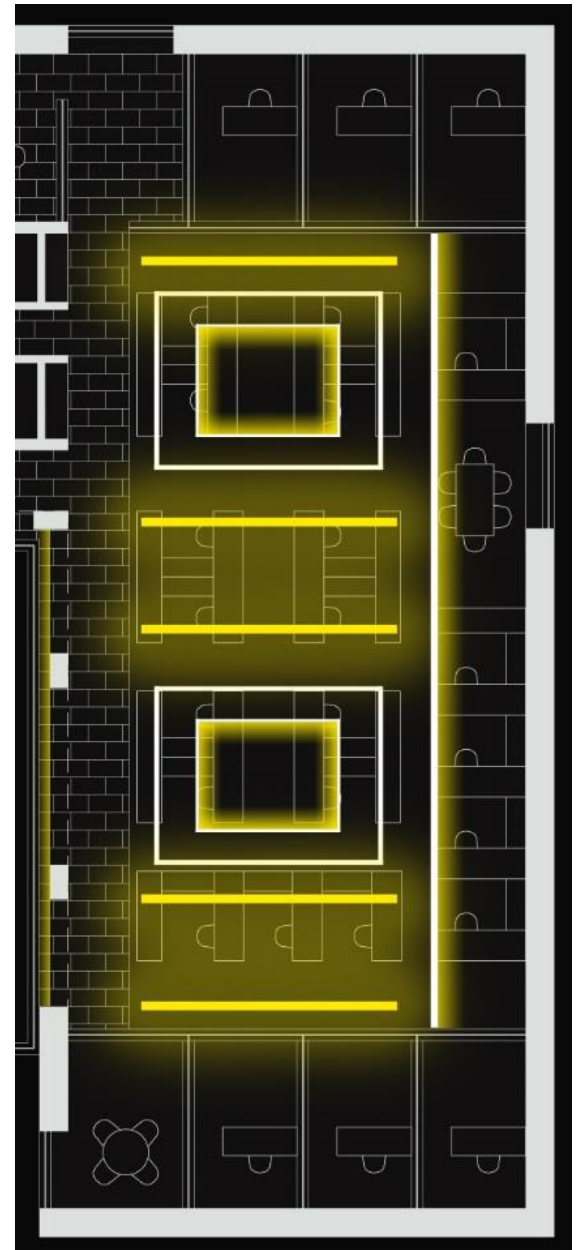
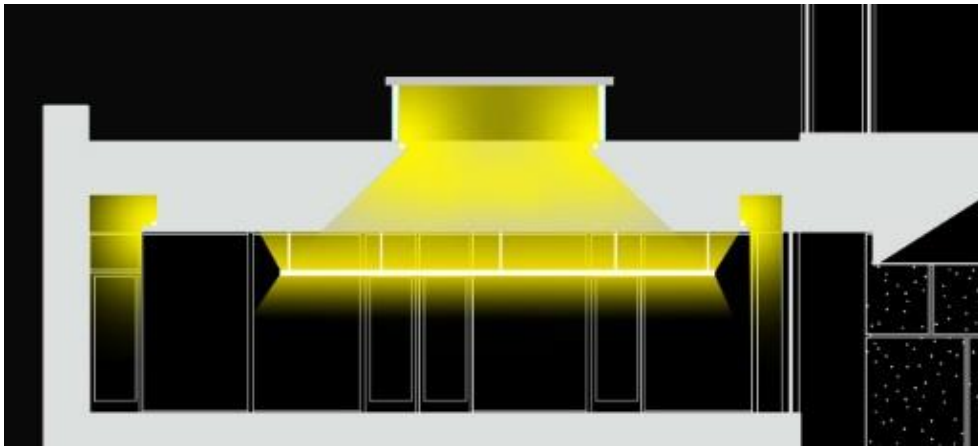
OPEN OFFICE

$$\text{LPD} = 0.98 \text{ W/ft}^2$$

$$E_{\text{H}} = 30 \text{ fc}$$

$$E_{\text{V}} = 15 \text{ fc}$$





OVERVIEW CONCEPT SITE LIGHT BOX LIGHT COURT LOWER LOBBY OFFICE



Dr. Mistrick

Shawn Good

Vincent D'Antonio

Penn State AE Department

The Barnes Foundation

Fisher Marantz Stone

Tod Williams Billie Tsien Architects

THANK YOU

REFERENCES

<http://static.businessinsider.com/image/526eb154ecad04fa4623781b/image.jpg>

http://upload.wikimedia.org/wikipedia/commons/0/09/Im_Salar_de_Uyuni.jpg