

An aerial photograph of Miami Beach, showing the coastline, sandy beaches, turquoise water, and a dense urban area with numerous buildings and palm trees. The image is used as a background for the project announcement.

MIAMI BEACH Citywide Smart Lighting Project

G.O. BOND
PHASE 1C

City of Miami Beach
Public Outreach
March 2024

Project Timeline

2016

- Citywide photometric analysis
- 18.2% of the City's roadways fell within the acceptable range for illuminance and uniformity ratios
- Study recommended develop a Lighting Master Plan and implementation of a Computerized Maintenance Management System CMMS"

2017

- RFQ (Procurement) Smart City Street Lighting System

Dec 2018

- Phase 1A - Initial Assessment - 9000 existing light poles
- Detailed survey and inventory of existing street lighting across Miami Beach
- Development of City Lighting Standards

2019-2022

- Phase 1B (planning and development / exploring smart city components and maintenance needs)
- Estimate for 100% citywide Lighting Retrofit = \$25M Construction Cost
- Development of Citywide Lighting Approved Product List | Selection of Lighting Management System | Installation of Mockups

2023-2024

- Phase 1C – Design (We are here, progressing to 90%)
- Development of Lighting Analysis and Lighting Construction Plans
- Maximize lighting improvements: \$3.5M construction (GOB Tranche 1, Lighting Upgrade of up to 1,400 luminaires)

2024-2025

- Phase 1C – Construction – Advertisement schedule May/June 2024
- Phase 2 –Design (GOB Tranche 2 - \$6.5M for additional lighting improvements planned).

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Benefits and Considerations

BENEFITS TO THE COMMUNITY

- Promote safety.
- Enhance the resident and visitor experience in the streets at night.
- Provide uniform street lighting conditions throughout the City.
- Minimize unwanted lighting on residences or property windows by strategically adding “house shields” to the luminaires.

DESIGN CONSIDERATIONS

- Use of City Approved Product List (APL) fixtures
- Maximize improvements with limited budget (\$3.5M available - GOB T1)
- Prioritization of Deficient Areas
- Existing Conditions and Recent Upgrades
- Power Service Upgrade Needs – improve and combine Load Centers
- Use of House Side Shield to limit glare and spillage onto private property
- Use cut-off fixtures to limit uplighting following statewide Dark Skies Initiative
- Use of Control Nodes and Lighting Maintenance System (monitoring, dimming, automated notifications)
- Re-use of Existing Lighting Infrastructure without light pole additions
- Effective Projected Area (EPA) of existing vs proposed fixtures
- Veiling limitations
 - Existing use of decorative pedestrian fixtures with large existing spacing and low mounting height to provide roadway lighting illumination.



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Phase-1C: Proposed Upgrades and Recently Completed



Legend

Magenta Zones: Phase 1C Proposed

Green Zones: Recently completed upgrades

Yellow Zones: Proposed separate upcoming capital project

3000K vs. 4000K Selection Considerations

4000K Correlated Color Temperature (CCT) is recommended for this project phase based on the following:

- Provide a balanced color lighting through the city
- Match recent successful lighting improvements using 4000 CCT:
 - Lakeview, La Gorce Island, Sunset Islands and Islands on Venetian Causeway.
 - Roadways / parks / parking lots improved
 - Operations improvements in deficient areas including Flamingo Neighborhood
 - FPL replacement of all alleyways with 4000k
- Improve visibility and safety – MBPD Cameras / Drivers / Pedestrians
- Prioritize deficient areas (underlit / over-lit locations)
- Maximize useful life of upgraded areas and minimize rework
- Maximize improvements with limited budget
 - GO Bond and City Available Funding: T1 \$3.5M (Future T2 \$6.5M)
 - \$25M estimated in 2022 for retrofitting of all 9000 city owned poles



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RECENT LED UPGRADES IN THE FLAMINGO PARK NEIGHBORHOOD



Light fixtures updated in residential areas as needed over time.

Approximately 200 fixtures already upgraded to LED

~ 50 fixtures using 3000k CCT on 11 St.
~ 150 fixtures using 4000k CCT spread out

Estimated funds spent : \$400k

Proposed Fixtures

(in kind replacement from Approved Product List - APL)



Five (5) Luminaire Models proposed

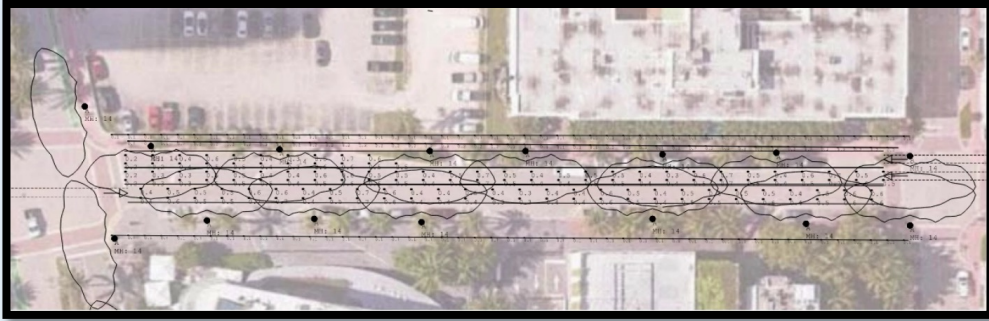
Proposed LED	Luminaire Lumens	4000K
AT BO P203 R3	10260	4000K
AT BO P303 R3	15950	4000k
GVD P50 40K GL3	13202	4000k
PTE3 P80 40K GL3	11407	4000K
PUCL2 P50 R3 40K	12288	4000K
PUCL3 P100 40K	15605	4000K
Alberstlund Maxi Post 4K	4939	4000K
ATBO P454 R3 4K	25200	4000K

Eight (8) Lumens Packages proposed

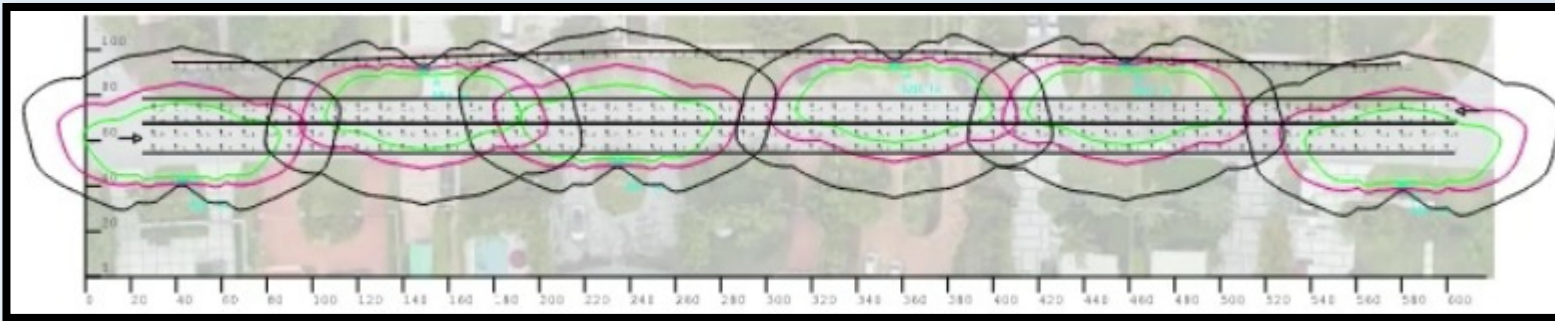
Phase-1 B Mockups: Reference

Tested city blocks - installed 2022-2023:

1. **GVD3 (Acorn Decorative) Style - 4000K CCT:** Collins Ave, between South Pointe Dr and 1 St



2. **GVD3 (Acorn Decorative) Style - 3000K CCT:** Prairie Ave, between 45 – 46 streets



3. **PTE3 (Stanley Paulsen (China Hat) Decorative) Style - 3000K CCT:** Meridian Ave, north of Dade Blvd

4. **Cobra head - 3000K CCT:** Michigan Ave between 7 - 8 streets

5. **Cobra head - 4000K CCT:** Byron Ave, between 78 – 79 streets

6. **Cobra head - 4000K CCT:** 72 St, between Dickens Ave and Abbott Ave

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Reference

Upgraded lights on 11 Street near Alton Road.



Please complete our project community poll on the project website here: miamibeachfl.gov/smartcitylighting

For more information or questions, please contact Kevin Pulido at kevinpulido@miamibeachfl.gov



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