

R2 A REQUEST FOR APPROVAL TO AWARD A CONTRACT PURSUANT TO
INVITATION TO BID (ITB) 2024-458-ND CITYWIDE LED LIGHTING PROJECT.
(PUBLIC WORKS)
Applicable Area:



COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission
FROM: Eric Carpenter, City Manager
DATE: November 20, 2024
TITLE: REQUEST FOR APPROVAL TO AWARD A CONTRACT PURSUANT TO INVITATION TO BID (ITB) 2024-458-ND CITYWIDE LED LIGHTING PROJECT. (PUBLIC WORKS)

RECOMMENDATION

It is recommended that the Mayor and City Commission approve the award of a contract to R & D, Electric Inc., the lowest, responsive, responsible Bidder to Invitation to Bid (ITB) No. 2024-458-ND for Citywide LED Lighting Upgrade Project, and authorize the City Manager and City Clerk to execute a contract.

This solicitation is currently under the cone of silence.

BACKGROUND/HISTORY

In 2016 the City's Public Works Department completed the first step in the preparation of a Citywide Street Lighting Master Plan by conducting a city-wide photometric analysis, an effort to assess the state of the City's lighting system. With this analysis the Department confirmed that large areas of the City were either over lit or under lit, with only approximately 18.2% of the City's roadways falling within the assumed acceptable range for illuminance and uniformity.

Following the recommendations of said study, between 2018 to 2019 the City developed the Phase 1A Master Plan Concept Design for the Smart City Street Lighting System that defined the City's lighting goals to improve uniformity, and upgrade existing lighting to LED and to improve operations and maintenance with the implementation of a Computerized Maintenance Management System (CMMS). As part of this work, the Smart City Lighting Standards and Urban Lighting Report was approved and adopted by Commission in 2020.

Phase 1B, subsequently completed between 2020 and 2023, further explored various smart city components and alternatives. A city-wide lighting retrofit was estimated at approximately \$25 million, as part of the Phase 1B efforts. Phase 1B work also established the Lighting Management System criteria and included the installation of mockups throughout the City.

The objective of Phase 1C, the current phase of the Citywide Smart Street Lighting Project, is to upgrade approximately 1000 luminaires throughout Miami Beach. This phase aims to achieve the largest number of lighting improvements without the addition of new light pole infrastructure. A significant feature of this phase is the inclusion of City-approved Lighting Management System control nodes, enabling offsite monitoring and control of the lighting assets to improve City operations and maintenance. This phase builds upon continuous improvements across the City, where multiple fixtures, including those in City parks, parking lots, and neighborhoods, have already been upgraded to LED to address known deficiencies and enhance safety and operations. The current phase focuses on areas not yet updated to LED, with prioritization given to locations identified by the City based on the preliminary Citywide study conducted (Citelum Report), which pinpointed the lighting compliance and deficient areas throughout the City. For better

understanding and organization, the City has divided this project into different neighborhoods, each with varying degrees of priority for lighting upgrades. The identified neighborhoods and sub-neighborhoods for this project include:

- Flamingo
- Palm View
- Bayshore
- La Gorce
- Alison Island
- North Shore

The scope of this project primarily consists of replacing the existing approximately 1,000 luminaires with new LED Luminaires and some pertinent electrical components. The luminaire replacement is proposed in kind, and following the use of lighting fixtures per the Smart City Lighting Standards and Urban Lighting Report compiled as part of the Phase 1A Master Plan Concept Design for the Smart City Street Lighting System and adopted by Commission in May 2020. Part of the scope of work will also include repairs at existing light pole locations and replacement or installation of some load centers, as noted in the plans. The scope also includes furnishing, installing, and integrating a lighting management system (LMS) per the plans and specifications.

On October 30, 2024, the City Commission brought up for discussion the ITB for Citywide LED Lighting Project being presented for approval. An inquiry was raised by Commissioner Alex Fernandez on the type of lighting that would be placed on the historic districts, particularly the Flamingo Park and Palm View, and whether the award took into consideration, the design, that go in line according to the historic character of these neighborhoods. It was shared by City staff that the lighting proposed were upgrades to LED lighting and that fixtures were being replaced with the same exact type (like for like). Commissioner Fernandez continued the discussion, raising concerns that the City Commission was being presented an item for approval to award without having seen the visuals. Commissioner Fernandez made a request to be presented the same presentation and or visuals provided at Community outreaches. He also inquired whether the historic neighborhoods would have an opportunity to select nicer fixtures since they would have likely waited decades for the fixtures to be enhanced. Commissioner Fernandez made a motion to come back to the next Commission and to attach the visuals to the memorandum.

The Public Outreach that was conducted as part of the Phase 1C design process included the following:

- A project presentation video and website is available in this link: (<https://www.miamibeachfl.gov/smartcitylighting/>), with an overview of the project history and the proposed improvements. The presentation included visuals of the proposed luminaires, and how these were intended as smart, LED, in-kind replacements.
- Conducted a public survey that determined the proposed Correlated Color Temperature (CCT) by neighborhood, with results incorporated into the final design.
- Presented at various neighborhood association meetings and GOB Committee meetings.
- Also responded to multiple inquiries from the community and from commissioners on the proposed plan.

Attachment B presents the requested visuals provided at Community outreach events for review. To engage a contractor to complete the lighting improvement project, ITB 2024-458-ND was released.

ANALYSIS

On June 14, 2024, the ITB was issued. The Procurement Department issued bid notices to approximately 8,523 companies utilizing the City's e-procurement system, with 89 prospective bidders accessing the solicitation. A voluntary pre-bid conference to provide information to proposers submitting a response was held on June 25, 2024. ITB responses were due and received on August 6, 2024. The City received six (6) bids from the following firms: AUM Construction, Inc., Horsepower Electric, Inc., New Era Electric, Inc., R & D, Electric Inc., Sice, Inc., and Signal Technology and Installation, Corporation. See Attachment A for a tabulation of bids received.

The ITB stated that the lowest responsive and responsible Bidder meeting all ITB terms, conditions, and specifications would be recommended for award. The Procurement Department and Public Works Department found that the bid submitted by R & D, Electric Inc. meets the requirements of the ITB, including:

1. Licensing Requirements: Bidder or subcontractor shall be a State of Florida Certified General Contractor OR Miami Dade County Licensed General Contractor AND a prequalified FDOT "Electrical Work" Class Contractor AND a State of Florida Certified Electrical Contractor OR a Miami Dade County Licensed Master Electrician.

Florida Sol Systems, Inc. is State certified as a General Contractor. The state license number is CGC 007467, expiring on August 31, 2026. Florida Sol Systems, Inc. is State certified as an Electrical Contractor. The state license number is EC13009154, expiring on August 31, 2026. Rtech Engineering LLC is a prequalified FDOT "Electrical Work" Class Contractor, expiring on June 30, 2025

2. Previous Experience of Bidder (Firm or its principal) or Subcontractor. Bidder or its principal or subcontractor must have completed a minimum of three (3) projects of similar scope and budget within the last ten (10) years, two (2) of which must be completed, and the third may be ongoing. A project of similar scope shall be defined as a roadway lighting improvement project with a construction cost of at least \$1.5 million.

R & D, Electric Inc. provided three (3) positive and satisfactory references for Rtech Engineering LLC documenting compliance with the minimum experience requirement.

3. Previous Experience of Bidder (Firm) Project Manager. Bidder's Lead Project Manager must have completed at least two (2) projects of similar scope and budget within the last ten (10) years. A project of similar scope shall be defined as a roadway lighting improvement project with a construction cost of at least \$1.5 million.

R & D, Electric Inc. submitted proof of the required experience for its personnel.

4. Previous Experience of Bidder (Firm) Superintendent. Bidder's Superintendent must have completed at least two (2) projects of similar scope and budget within the last ten (10) years. A project of similar scope shall be defined as a roadway lighting improvement project with a hard construction cost of at least \$1.5 million.

R & D, Electric Inc. submitted proof of the required experience for its personnel.

Accordingly, R & D, Electric Inc. has been deemed the lowest responsive and responsible Bidder, meeting all ITB terms, conditions, and specifications.

Below is a summary of the firm as articulated in its bid response:

R & D Electric Inc. is a Miami-Dade County certified Small Business Enterprise (SBE) that has been in business for over sixteen years and has provided electrical services to various South

Florida cities, municipalities, highway authorities, and agencies in street lighting, traffic signalization, and utility work. Previous work includes services for the Florida Department of Transportation, MDX Authority, Broward County, and the City of Coral Gables. Since 2014, R & D Electric Inc. has provided routine electrical services to the City, including emergency repairs and planned repairs or small projects. To date, the City is satisfied with the service being provided.

FISCAL IMPACT STATEMENT

The bid submitted by R & D, Electric Inc., the lowest responsive and responsible Bidder, was for the grand total amount of \$1,400,568.11. The contract total with the bid alternate and the City’s contingency is \$1,707,197.92, which is \$1,935,262.88 lower than the estimated budget of \$3,642,460.80, as stated in the ITB.

R & D, Electric Inc. Grand Total:	\$1,400,568.11
Bid Alternate Selected:	\$ 151,430.00
Subtotal:	\$1,551,998.11
Plus 10% Owner’s Contingency:	\$ 155,199.81
Total:	\$1,707,197.92

Does this Ordinance require a Business Impact Estimate?

(FOR ORDINANCES ONLY)

If applicable, the Business Impact Estimate (BIE) was published on:

See BIE at: <https://www.miamibeachfl.gov/city-hall/city-clerk/meeting-notice/>

FINANCIAL INFORMATION

64918- CONST, SVCS-LIGHTING – 307 / 307-0810-000342-29-400-592-00-00-00-64918	\$ 401,000.00
64918 – CONST, SVCS-LIGHTING – 306 / 306-1720-000342-00-400-592-00-00-00-64918	\$ 1,000.00
64918- CONST, SVCS-LIGHTING - - 305/ 305-0810-000342-29-400-592-00-00-00-64918	\$ 1,000.00
67319 – CONT, SVCS-LIGHTING –392 / 392-0840-000342-29-401-521-00-00-00-67319	\$2,815,846.82
27800 -CONSTRUCT -LIGHTING -306 / 306-0840-069357-00-410-000-00-00-00-27800	\$ 423,613.98

CONCLUSION

Based on the foregoing, it is recommended that the Mayor and City Commission of the City of Miami Beach, Florida, approve the award of a contract to R & D, Electric Inc., the lowest responsive and responsible Bidder to ITB No. 2024-458-ND for Citywide LED Lighting Upgrade Project and authorize the City Manager and City Clerk to execute a contract.

Applicable Area

Citywide

Is this a “Residents Right to Know” item, pursuant to City Code Section 2-17?

Yes

Is this item related to a G.O. Bond Project?

Yes

Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481, includes a principal engaged in lobbying? No

If so, specify the name of lobbyist(s) and principal(s):

Department

Procurement

Sponsor(s)

Co-sponsor(s)

Condensed Title

Award ITB 2024-458-ND, Citywide LED Lighting Project. PW/PR

Attachment A

ATTACHMENT A - TABULATION
ITB 2024-458-ND CITYWIDE LED LIGHTING UPGRADE PROJECT

GRAND TOTAL BID AMOUNT	\$	2,625,375.00	\$	2,625,375.00	\$	2,350,757.30	\$	1,400,568.11	\$	2,729,690.00	\$	4,065,725.60
------------------------	----	--------------	----	--------------	----	--------------	----	--------------	----	--------------	----	--------------

BID ALTERNATE														
Description	Quantity	U / M	ALUM Construction, INC.		Horaspower Electric, INC.		New Era Electric, INC.		R & D Electric, INC. ¹		Sico, INC.		Signal Technology and Installation Corporation	
			Unit Cost	Total (Quantity_X_Unit_Cost)	Unit Cost	Total (Quantity_X_Unit_Cost)	Unit Cost	Total (Quantity_X_Unit_Cost)	Unit Cost	Total (Quantity_X_Unit_Cost)	Unit Cost	Total (Quantity_X_Unit_Cost)	Unit Cost	Total (Quantity_X_Unit_Cost)
Mobilization (Electrical Plans)	1	LS	\$ 35,000.00	\$ 35,000.00	\$ 25,000.00	\$ 25,000.00	\$ 30,000.00	\$ 30,000.00	\$ 2,600.00	\$ 2,600.00	\$ 2,000.00	\$ 2,000.00	\$ 308,027.68	\$ 308,027.68
Maintenance Of Traffic (Mot) (Electrical Plans)	1	LS	\$ 30,000.00	\$ 30,000.00	\$ 48,000.00	\$ 48,000.00	\$ 25,000.00	\$ 25,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 49,213.45	\$ 49,213.45
Concrete Sidewalk And Driveways, 6" Thick	71	SY	\$ 150.00	\$ 10,650.00	\$ 150.00	\$ 10,650.00	\$ 224.00	\$ 15,904.00	\$ 100.00	\$ 7,100.00	\$ 100.00	\$ 7,100.00	\$ 261.84	\$ 18,590.04
Conduit, Furnish & Install, Open Trench	273	LF	\$ 80.00	\$ 21,840.00	\$ 45.00	\$ 12,285.00	\$ 25.00	\$ 6,825.00	\$ 50.00	\$ 13,650.00	\$ 50.00	\$ 13,650.00	\$ 40.91	\$ 11,168.43
Conduit, Furnish & Install, Directional Bore	478	LF	\$ 80.00	\$ 38,240.00	\$ 45.00	\$ 21,510.00	\$ 30.00	\$ 14,340.00	\$ 50.00	\$ 23,900.00	\$ 50.00	\$ 23,900.00	\$ 73.64	\$ 35,199.92
Conduit, Furnish & Install, Aboveground	33	LF	\$ 100.00	\$ 3,300.00	\$ 50.00	\$ 1,650.00	\$ 20.00	\$ 660.00	\$ 38.00	\$ 1,254.00	\$ 32.78	\$ 1,080.09	\$ 33.00	\$ 1,099.00
Conduit, Remove, Aboveground	400	LF	\$ 5.00	\$ 2,000.00	\$ 5.00	\$ 2,000.00	\$ 2.50	\$ 1,000.00	\$ 1.00	\$ 400.00	\$ 1.18	\$ 472.00	\$ 4.44	\$ 1,776.00
Pull & Splice Box, F&I, 18" X 24" Cover Size	25	EA	\$ 2,200.00	\$ 55,000.00	\$ 2,300.00	\$ 57,500.00	\$ 1,125.80	\$ 28,145.00	\$ 2,000.00	\$ 50,000.00	\$ 2,000.00	\$ 50,000.00	\$ 3,374.13	\$ 84,353.25
Electrical Power Service, F&I, Underground, Meter Purchased by Contractor	1	AS	\$ 8,000.00	\$ 8,000.00	\$ 15,000.00	\$ 15,000.00	\$ 6,032.00	\$ 6,032.00	\$ 15,000.00	\$ 15,000.00	\$ 7,386.71	\$ 7,386.71	\$ 8,740.93	\$ 8,740.93
Electrical Service Wire, Remove	1320	LF	\$ 1.00	\$ 1,320.00	\$ 0.10	\$ 132.00	\$ 1.50	\$ 1,980.00	\$ 1.00	\$ 1,320.00	\$ 1.49	\$ 1,966.80	\$ 1.49	\$ 1,966.80
Electrical Service Disconnect, Remove, Pole or Cabinet to Remain	8	EA	\$ 1,500.00	\$ 12,000.00	\$ 800.00	\$ 6,400.00	\$ 8.50	\$ 68.00	\$ 1.00	\$ 8.00	\$ 856.92	\$ 6,855.36	\$ 887.78	\$ 7,102.08
Lighting Conductors, F&I, Insulated, No 8 - 6	1527	LF	\$ 5.00	\$ 7,635.00	\$ 5.00	\$ 7,635.00	\$ 3.82	\$ 5,805.84	\$ 4.00	\$ 6,108.00	\$ 3.16	\$ 4,825.32	\$ 3.46	\$ 5,296.86
Lighting Conductors, F&I, Insulated, No 4 To No 2	30	LF	\$ 10.00	\$ 300.00	\$ 8.00	\$ 240.00	\$ 13.00	\$ 390.00	\$ 8.00	\$ 240.00	\$ 4.52	\$ 135.60	\$ 5.73	\$ 171.90
Lighting Conductors, F&I, No. 10 - 3/0 (0 To 000)	1850	LF	\$ 17.00	\$ 31,450.00	\$ 7.50	\$ 13,875.00	\$ 20.00	\$ 37,000.00	\$ 12.00	\$ 22,200.00	\$ 8.41	\$ 11,858.50	\$ 12.08	\$ 22,348.00
Pole Cable Distribution System	11	EA	\$ 1,500.00	\$ 16,500.00	\$ 2,000.00	\$ 22,000.00	\$ 2,400.00	\$ 26,400.00	\$ 250.00	\$ 2,750.00	\$ 2,655.00	\$ 29,205.00	\$ 32,511.60	\$ 36,075.98
BID ALTERNATE TOTAL:			\$	273,235.00	\$	243,817.00	\$	199,724.84	\$	151,430.00	\$	576,450.25	\$	433,143.12
GRAND TOTAL INCLUDING ALTERNATE:			\$	2,898,610.00	\$	2,899,360.00	\$	2,550,482.14	\$	1,551,998.11	\$	3,306,140.25	\$	4,498,868.72

¹Footnote
¹Recommended for Award

An aerial photograph of Miami Beach, Florida, showing the coastline, beach, and dense urban development. The ocean is on the left, and the city extends inland towards the right. The text is overlaid on the left side of the image.

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).

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.



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

Up to 45 CMB LED Light Poles recently upgraded by operations (no 7 pin)

Up to 80 CMB Light Poles planned to be upgraded. (Mix of under-lit and over-lit location) FPL fixtures not included.

Up to 55 CMB Light Poles upgraded with 7 pin connector by operations

Up to 450 CMB Light Poles planned to be upgraded. FDOT roads and parking lots not included.

Up to 120 CMB Light Poles (60+80) planned to be upgraded. (Under-lit location and recommendations from operations)

CMB project planned (North Beach NIP)

3000K vs. 4000K Selection Considerations

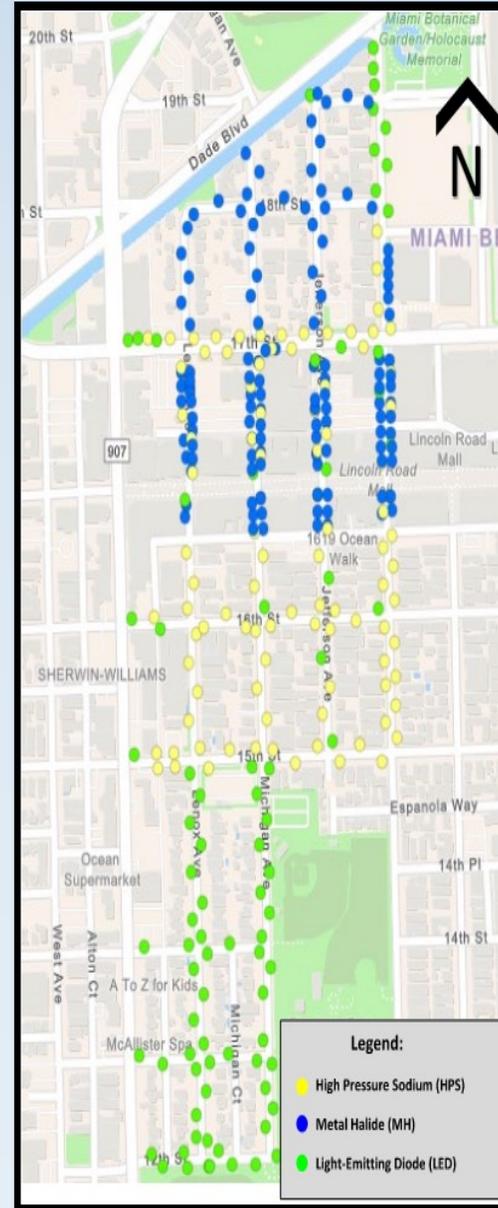
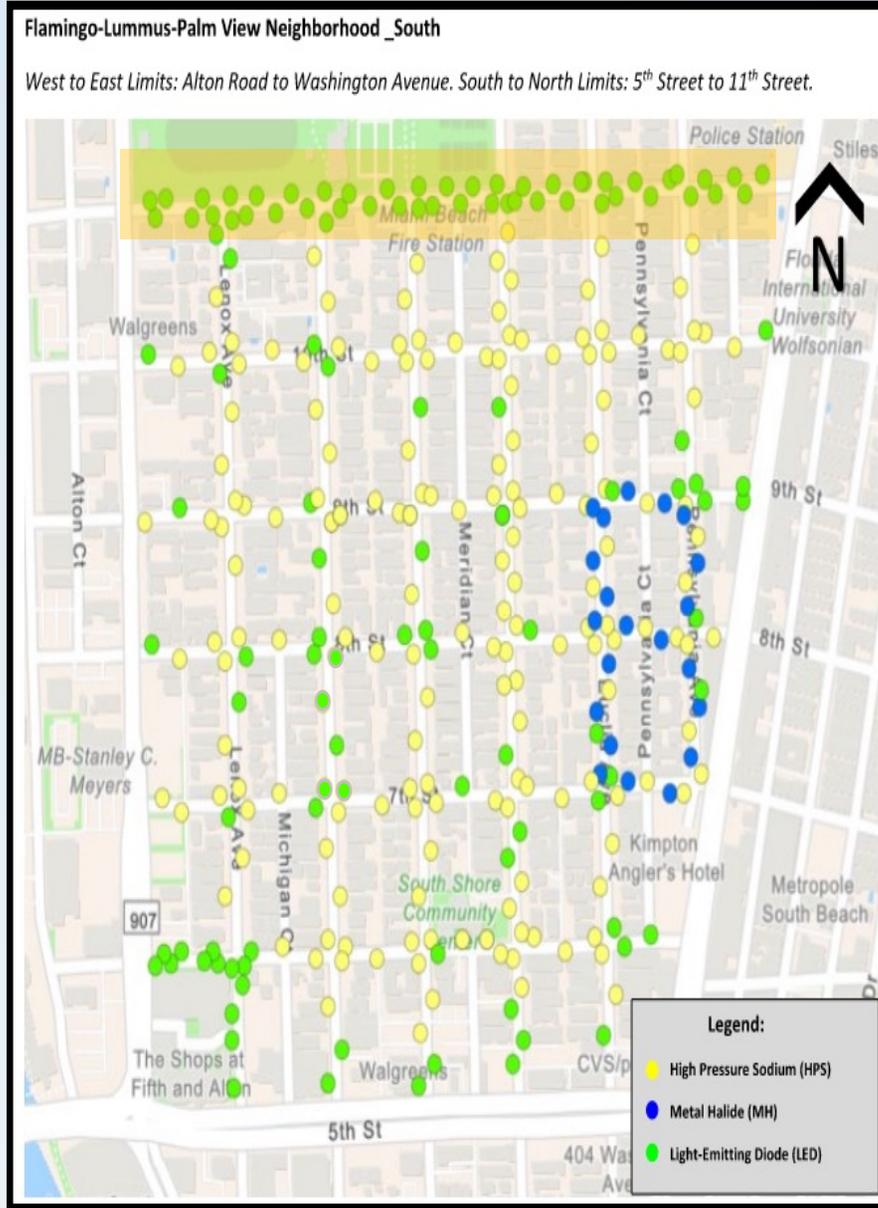
4000K Correlated Color Temperature (CCT) is recommended for this project phase based on the following:

- 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



MIAMI BEACH

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)



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

Five (5) Luminaire Models proposed

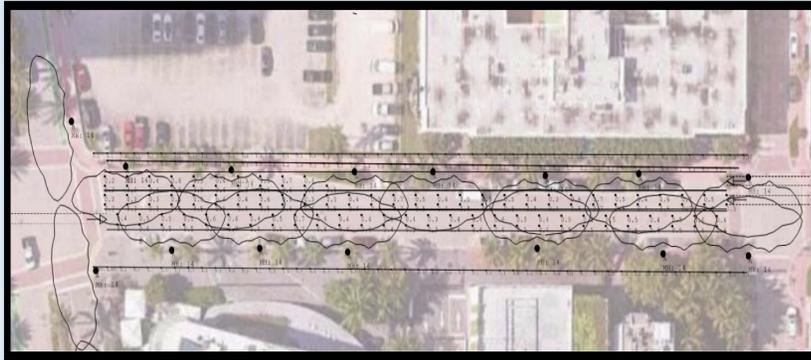
Eight (8) Lumens Packages proposed

MIAMIBEACH

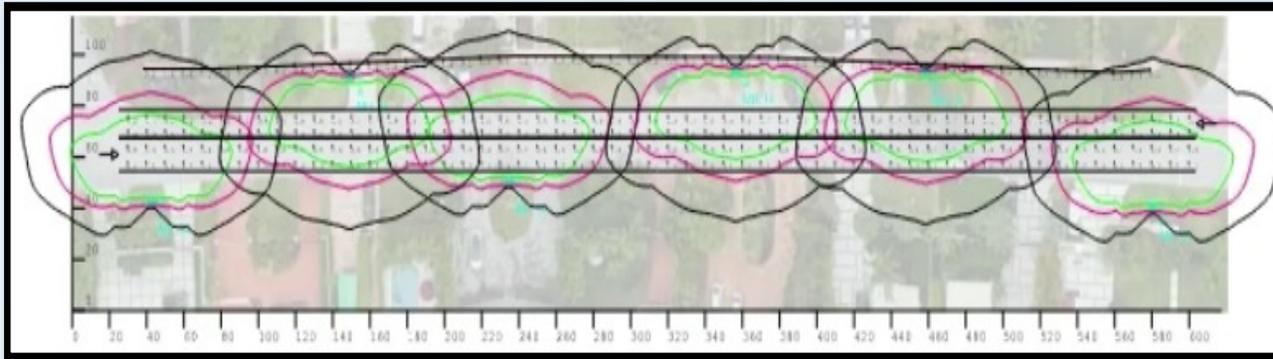
Phase-1B Mockups: Reference

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

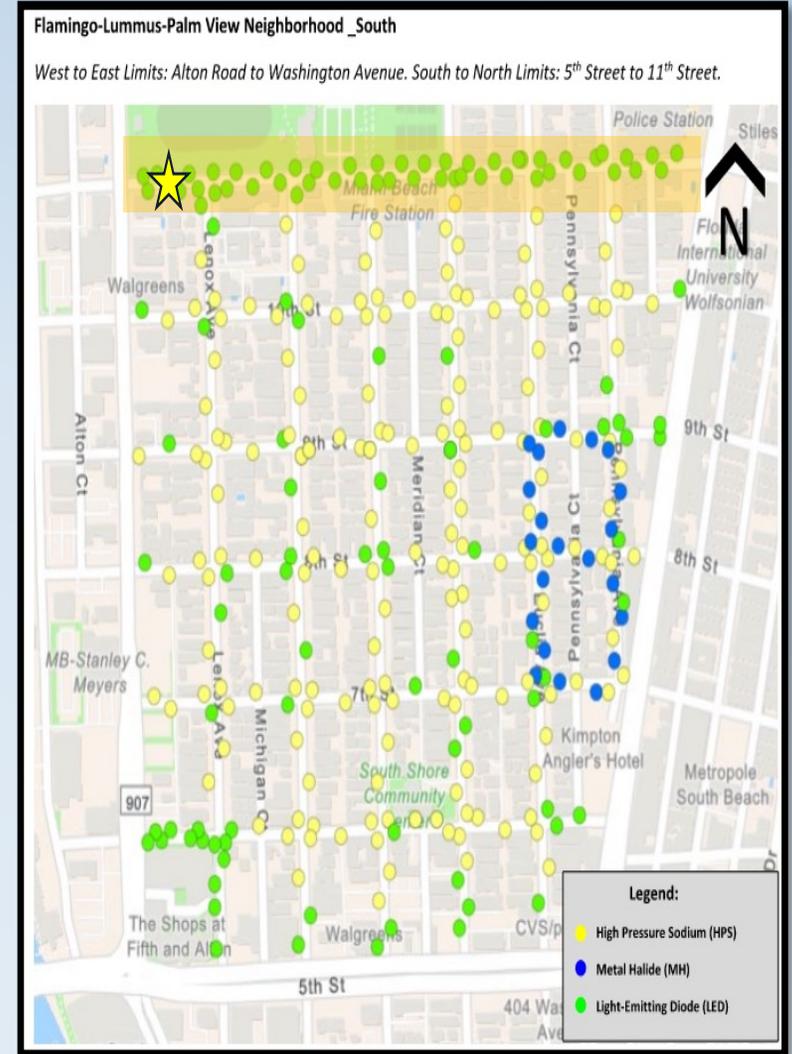
4. **Cobra head - 3000K CCT:** Michigan Ave between 7 - 8 streets

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

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

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



MIAMIBEACH