

MEMORANDUM

TO: Tom Harmer, Town Manager
FROM: Isaac Brownman, Public Works Director
DATE: May 13, 2019
SUBJECT: Utilities Undergrounding Project Update

Recommended Action

Support of up to 35' total pole heights on GMD and up to 25' total pole heights within the neighborhoods to facilitate future technology deployment within the Town.

Background

Public Works provides monthly status reports regarding the Utilities Undergrounding Project to update the Commission relative to the utilities undergrounding and fiber project. When necessary, staff will seek Commission policy direction or concurrence on elements of the project.

Underground Project – Funding

No additional information this month. Staff is in process of developing Fiscal Year 2019-2020 (FY20) budgets including Undergrounding components and Bond / P3 funding considerations.

Underground Project – Design-Build RFP

Staff has provided final drafts of Master Agreement, Work Assignments for handling and staging of FPL Materials, Phase 1 and 2 electrical undergrounding construction agreement to Wilco Electrical, LLC. (Wilco). Notice-to-Proceed (NTP) is still anticipated to occur later in the Spring of 2019 with delivery of FPL materials to occur during the month of June.

Permit for Frontier project work within the FDOT Right of Way for Phase One has been obtained. This will allow them to proceed with initial undergrounding of their aerial copper telephone facilities. This work starts the initial construction related activities for the Undergrounding project. Frontier is to emphasize customer conversions from copper to fiber to lessen further the need for burying existing aerial lines. Anticipated commencement is June 2019.

Comcast has now completed their re-design on all five (5) phases, and we are currently in negotiations with them to ensure alignment with our budget. The new design includes significant reductions in proposed infrastructure that was included in some of their earlier plan submissions.

Roles and responsibilities as defined by the Memorandum of Understanding for installing Town-owned fiber components are being negotiated between the Town, Wilco, and Waterleaf International LLC.

Underground Project – P3 Fiber Backbone and Provider Services

Magellan Advisors continues to assist the Town with negotiating terms of the prospective partnerships. Terms for the Memoranda of Understanding will be presented by Magellan at the May 20, 2019 meeting. The P3 project team has set the following milestone toward completion of P3 negotiations and contracts:

- June 2019: Finalize P3 Agreements for Town Commission Approval

Waterleaf International, LLC finalized the RF study to analyze two (2) Radio Frequency (“RF”) signal proliferation studies and models: one for pole heights at 35-ft. for Gulf of Mexico Drive (GMD) and 25-ft. for neighborhoods, and another for pole heights at 25-ft. for GMD and 15-ft. for neighborhoods. Results of RF study performed by Waterleaf International LLC will be presented at the May 20, 2019 meeting.

Based on the technical and financial aspects of the study, the recommended pole heights are 35-feet along Gulf of Mexico Drive and 25-feet within the neighborhoods, which is less than existing, average FPL pole heights based on a sampling of each. Fixtures can be placed lower at a lower height, for example, at 25-feet for Gulf of Mexico Drive and 15-to-20-feet within the neighborhoods. The fixture height along GMD will be predicated on the FDOT roadway lighting requirements.

Current New Federal Communications Commission (“FCC”) Regulations

Town Code Chapter 158.200 and 158.201 provides Town criteria for permitting and allowing personal wireless service facilities. Some of the current Town Code provisions will need to be updated once decisions are made related to pole height based on the RF study results and pole style as preferred by the commission.

Other Items of interest

FPL Phase One receipt of materials planned for June 2019 to site staging area.

▪ CDM Smith - Overall Budget Monitoring

- We continue to utilize Phase I and II estimates from FPL, Frontier, and Comcast to provide budget confirmation of negotiations with Wilco Electrical, LLC for these and all Phases. In negotiations with Wilco Electrical, LLC current submitted costs are favorable.
- **Street Lighting Budget for GMD**
The current budgeted amount of \$3,112,000 was to light a significant amount of GMD. The current FDOT Justification Study locations and additional locations noted by Commissioners should require a lesser amount, pending pole height, material, and fixture determination.

▪ CDM Smith - Schedule

- We expect some adjustments to the Master Schedule once our Design Build firm is under contract, we have more information on P3 agreements, and co-funding options are established. Construction start is anticipated late spring 2019.

Pole Materials Information

Several examples and locations of pole styles and types will be presented at the May 20, 2019 meeting. Several small cell samples will also be available for viewing and handling.

Location: Longboat Club Road (New Alignment)

Height: ~27 FT.

Color: Black

Arm: ~8 FT.

Material: Fiberglass

Base: Direct Buried w/Deco added

Fixture: Hwy Flat LED

Location: Cattlemen Rd (Benderson Park)

Height: ~30 FT.

Color: Black

Arm: ~15 FT.
Material: Aluminum
Base: Concrete (Brkwy)
Fixture: Hwy Flat LED

Location: 75th Street West Bradenton
Height: ~30 FT.
Color: Silver
Arm: ~15 FT.
Material: Aluminum
Base: Concrete (Brkwy)
Fixture: Hwy Flat LED

Location: Bee Ridge Rd.
Height: ~30 FT.
Color: Black
Arm: ~15 FT.
Material: Aluminum
Base: Concrete (Brkwy)
Fixture: Hwy Flat LED

Location: SR 64 Downtown Bradenton Signal Intersection
Height: ~25 FT.
Color: Black
Arm: ~15 FT
Material: Steel
Base: Concrete
Fixture: Hwy Flat LED

Location: SR 64 Downtown Bradenton
Height: ~25 FT.
Color: Black
Arm: ~4 FT.
Material: Steel Decorative
Base: Concrete
Fixture: Open Globe LED

Location: Green Bridge Palmetto
Height: ~25 FT
Color: Grey
Arm: ~8 FT.
Material: Concrete Decorative
Base: Concrete (integral)
Fixture: Decorative Shielded LED

Staff Recommendation

Based on the technical and financial aspects of the RF study, the recommended pole heights are 35-feet along Gulf of Mexico Drive and 25-feet within the neighborhoods, which is less than existing, average FPL pole heights based on a sampling of each.



Underground Update

Town Commission Regular Workshop

May 20, 2019



Agenda

- Milestones and Decisions
- Pole Heights based on RF Study
- Pole Types, Material and Style
- P3 Memorandum Of Understanding Terms
- Budget and Schedule Update
- Next Steps



Upcoming Milestones

- Pole Height
(Commissioner Consensus) Today
- Pole Style
(Commissioner Consensus) Today preferred
- Execute Wilco Master Agreement June 2019
- Delivery of FPL Phase 1 Materials June 2019
- Frontier Start Construction June 2019
- Wilco Start Construction June 2019
- P3 Agreements
(Commission Approval) July 2019



Pole Heights and RF Study

Waterleaf International, LLC



Pole Types, GMD Materials and Styles

Black Fiberglass



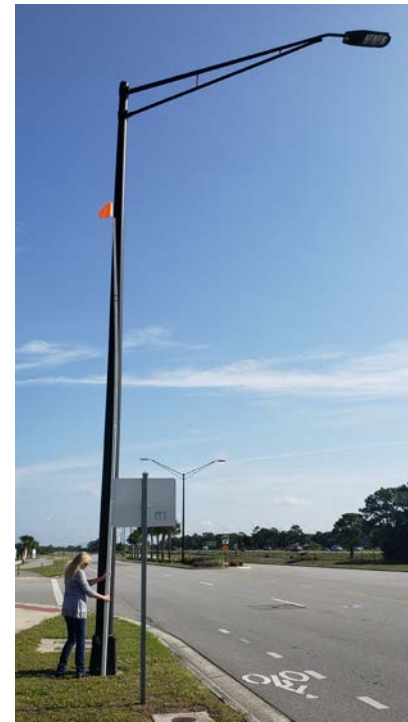
Longboat Key - Key Club Road

~ 27-ft. poles with 8-ft. arms ~ pole diameter of 10"

Direct Bury w/ Decorative Base Cover

Decorative Base cover diameter ~ 2-ft.

Black Aluminum (Flatter Fixture)



Sarasota County - Cattlemen (Benderson Park)

30-ft. poles with 15-ft. arms ~ pole diameter of ~ 9 inches

Pole on Concrete Base with Square Cover

Base cover diameter ~ 14-16 inches.

Pole Types, GMD Materials and Styles, cont.

Aluminum (Flatter Fixture)



75th Street West - Bradenton

30-ft. poles with ~15-ft. arms ~ pole diameter of 9"
Pole on Concrete Base with Square Cover
Base cover diameter ~ 14 – 16"

Black Aluminum (Flatter Fixture)



Sarasota County - Bee Ridge Road

30-ft. poles with 15-ft. arms ~ pole diameter of 9"
Pole on Concrete Base with Square Cover
Base cover diameter ~ 14 - 16"



Pole Types, GMD Materials and Styles, cont..

Signalized Intersection Pedestrian Lighting



Downtown Bradenton ~ 25-ft. poles with ~15-ft. arms ~ fixture mounted to Mast Arm Base

Pole Types, Neighborhood Materials and Styles

Black Steel (Decorative Fixture)



**Manatee County
Downtown Bradenton**
~25-ft. poles with ~4-ft. arms
Pole diameter of ~ 8 inches
Base diameter 16 inches

Grey Concrete (Decorative Fixture)



**Manatee County
Green Bridge**
~25-ft. poles with ~8-ft. arms
Pole diameter of ~ 8-9 inches
Concrete Base diameter ~18 inches



Recommendations

Pole Height

- ✓ 35-ft. on Gulf of Mexico Drive (SR 789):
Light fixture at approx. 25-ft. +/- to meet FDOT luminance criteria.
- ✓ 25-ft. in neighborhoods:
Light fixture at 15-20-ft. +/- as desired.

Style

- ✓ Black or other dark **color** poles
- ✓ Aluminum or fiberglass **material** with decorative base cover
- ✓ Cobra head **fixture style** for GMD
Similar to Cattlemen & Bee Ridge Road (covers FDOT well)
- ✓ Decorative **fixture style** for Neighborhoods



Pole Types, Materials and Styles – Devices

Nokia

Small Cell



Ubiquia

Small Cell





Pole Types, Materials and Styles – Devices

Nokia

Antenna – Top Mounted



Ubiquia

Antenna – Top Mounted





P3 Memorandum of Understanding (“MOU”) Terms

Magellan Advisors





Key Budget Highlights

No major changes in the budget from our last report

We have finalized the negotiations for Phase I & II on the UG portion for FPL and remain under budget by approximately \$645K.

Meanwhile, we are still under negotiations with Comcast.

Frontier will begin work within Phase I and has reduced their scope. The same is being done for their remaining phases, thus reducing budget.



Key Budget Highlights Cont.

	Original Budget	Current Budget/Negotiated	Engineering Deposit/ Materials	
FPL Phase 1	\$4,425,495.93	\$3,781,985.00	\$183,432.00	\$460,078.93
FPL Phase 2	\$7,300,662.88	\$5,629,209.01	\$1,485,841.00	\$185,612.87
Frontier Phase 1	\$339,082.00	\$256,000.00	\$ -	\$83,082.00
Frontier Phase 2	\$375,000.00	\$437,500.00	\$ -	(\$62,500.00)
Comcast Phase 1 & 2	In Negotiations			



Undergrounding Schedule/Milestones

The Master Agreement is with our UG contractor

We have prepared the first 3 Work Assignments;

- Staging/Managing FPL Materials
- FPL Undergrounding for Phase 1
- FPL Undergrounding for Phase 2

Frontier will begin operations in Phase 1 within the next month

Comcast's facilities will be installed concurrently with the fiber installation

Future work assignments will take in consideration the street lighting and fiber and will follow the completion of the P3 design



Next Steps

- Waterleaf International LLC finalize fiber-optic backbone and SSL design based on pole heights and deliver to Wilco
- Concurrently, Town Manager sign Master Agreement and authorize Wilco to receive materials and begin GMD construction
- Bring the final P3 Agreements back to the Town Commission for formal approval to allow Waterleaf and Pinpoint to represent the Town on all matters related to fiber and SSL.

THANK YOU!

End of Agenda Item