

VILLAGE OF NORTH PALM BEACH WORKSHOP SESSION AGENDA

VILLAGE HALL COUNCIL CHAMBERS 501 U.S. HIGHWAY 1

David B. Norris Mayor

Susan Bickel Vice Mayor Darryl C. Aubrey President Pro Tem Mark Mullinix Councilmember Deborah Searcy Councilmember

Chuck Huff Village Manager Leonard G. Rubin Village Attorney Jessica Green Village Clerk

INSTRUCTIONS FOR "WATCH LIVE" MEETING

To watch the meeting live please go to our website page (link provided below) and click the "Watch Live" link provided on the webpage:

https://www.village-npb.org/CivicAlerts.aspx?AID=496

ROLL CALL

DISCUSSION

 <u>LIGHTHOUSE DRIVE BEAUTIFICATION AND TRAFFIC CALMING</u> Council discussion regarding the addition of bike lanes and traffic calming to Lighthouse Drive; and direction to staff on the beautification and traffic calming concepts A-F.

ADJOURNMENT

If a person decides to appeal any decision by the Village Council with respect to any matter considered at the Village Council meeting, he will need a record of the proceedings, and for such purpose he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based (F.S. 286.0105).

In accordance with the Americans with Disabilities Act, any person who may require special accommodation to participate in this meeting should contact the Village Clerk's office at 841-3355 at least 72 hours prior to the meeting date.

This agenda represents the tentative agenda for the scheduled meeting of the Village Council. Due to the nature of governmental duties and responsibilities, the Village Council reserves the right to make additions to, or deletions from, the items contained in this agenda.

THURSDAY, AUGUST 24, 2023 AFTER REGULAR SESSION

VILLAGE OF NORTH PALM BEACH PUBLIC WORKS DEPARTMENT

TO: Honorable Mayor and Council

THRU: Chuck Huff, Village Manager

FROM: Chad Girard, P.E, Public Works Director

DATE: August 24, 2023

SUBJECT: WORKSHOP – Lighthouse Drive Beautification and Traffic Calming

The Village of North palm Beach Citizens' Master Plan Report (2016) identified a number of infrastructure projects that the Village was encourage to pursue in order to work toward the vision identified by the members of the community who participated in the charrette process. One of the high priority projects included in the plan were:

• The addition of bike lanes and traffic calming to Lighthouse Drive.

The Village has hired 2GHO, Inc. Landscape Architects | Planners | Environmental Consultants (2GHO) to analyze Lighthouse Drive.

To date they have studied the conditions, performed a traffic study and sought community feedback through a survey in addition to meeting with all of the Council, Chief of Police and Fire Chief.

They have provided the attached inventory analysis report as well as a conceptual master plan and some individual design concepts that need further direction prior to finalizing the plan and report.

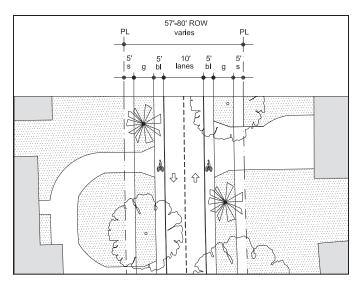
Staff is looking for feedback and prioritization on the beautification and traffic calming concepts A-F that have been developed in order to finalize the design master plan concept and provide a cost estimate for proposed improvements.

Lighthouse Drive

Lighthouse Drive is a key neighborhood street that connects the entire Village in an east-west route, including bridging across the North Palm Beach Waterway. Speeding was raised as a concern as well as a desire to improve the design of the road as a unifying corridor through the neighborhoods. Utilizing traffic calming techniques can help keep traffic speeds at an appropriate pace for the neighborhoods. Various techniques are listed on the following page. A key recommendation is to evaluate which elements can be incorporated on Lighthouse Drive.

Some design options for Lighthouse Drive were studied during the charrette. Using a consistent landscaping design of uniformly spaced trees reflects the civic importance of the street and visually narrows the roadway (a traffic calming technique). Incorporating bike lanes could improve mobility and safety, especially for children. Two options for adding dedicated bike lanes are illustrated. One option adds





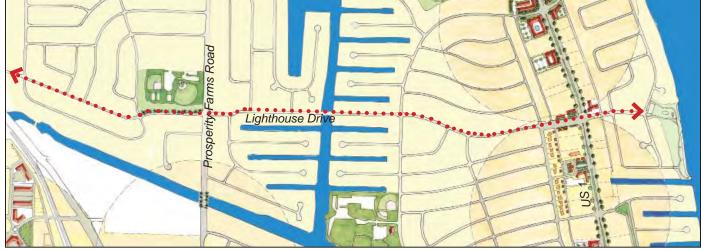
Top: A street section of Lighthouse Drive with existing roadway widened and striped to create bike lanes.

Middle Left: Existing condition on Lighthouse Drive.

Middle Right: The visual impact of adding a row of regularly spaced royal palms.

Bottom: Location map of Lighthouse Drive.





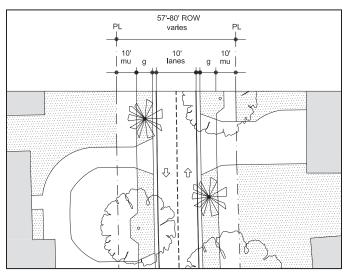
bike lanes by narrowing travel lanes and expanding the shoulders of the roadway. Alternatively, widening the sidewalks into multi-use paths provides an option that physically separates cyclists from traffic.

Traffic Calming Design Elements

The best way to calm traffic is to incorporate design elements that ensure the desired speed is the comfortable speed for drivers. Frequently, communities do not change the road design and post slower speeds on the roadway signage. This strategy relies on enforcement to achieve the intended outcome, rather than affecting the natural behavior of drivers.

An array of elements can be used in the design of a street to calm traffic. Care must be given to the design and function of the street for all users when using traffic calming design features. If designed properly, using one or more of the following traffic calming elements can both effectively slow traffic and provide civic embellishments to the village:

- narrow travel lane width
- fewer number of travel lanes
- on-street parking
- street trees to visually narrow roadway
- modern roundabouts
- mini circles
- medians
- curb extensions, chokers, and bulb-outs
- raised/textured crosswalks
- raised pedestrian tables
- bike lanes
- small radii at corners







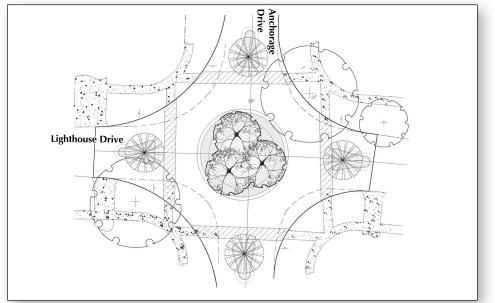


Top: Mini-circle and textured crosswalk in West Palm Beach.

Middle: Small medians at intersections can be a beautiful way to enhance a neighborhood and reduce motorist speeds.

Bottom: This curb build-out, outlined in red, shortens the pedestrian crossing distance and helps slow traffic.

Left: A street section of Lighthouse Drive with existing sidewalks widened to multi-use paths.



Roundabout - Anchorage Dr. and Lighthouse Dr.

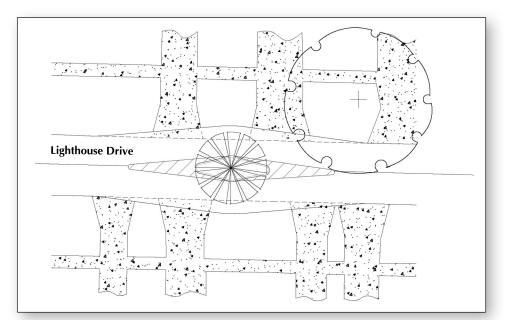
(With Mountable Curb)





Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida



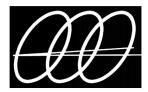


Median Options

Small Curbed Median - Single Palm

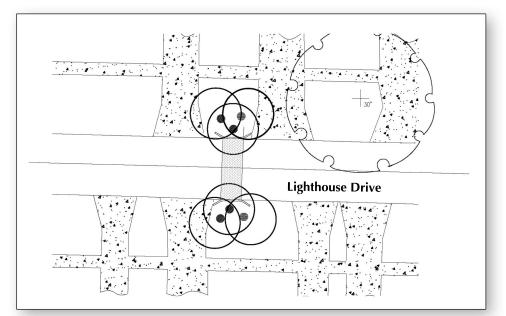
(With or Without Speed Table)





Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida

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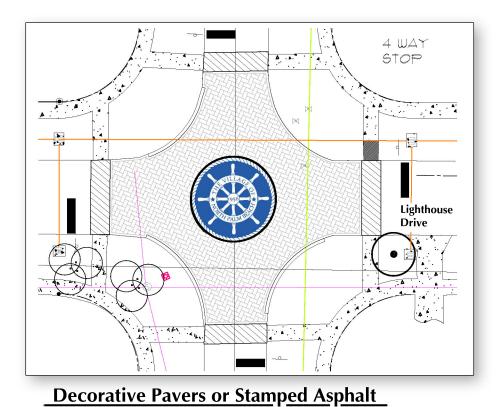
Curb Protected Landscape Opportunity (With or Without Speed Table)





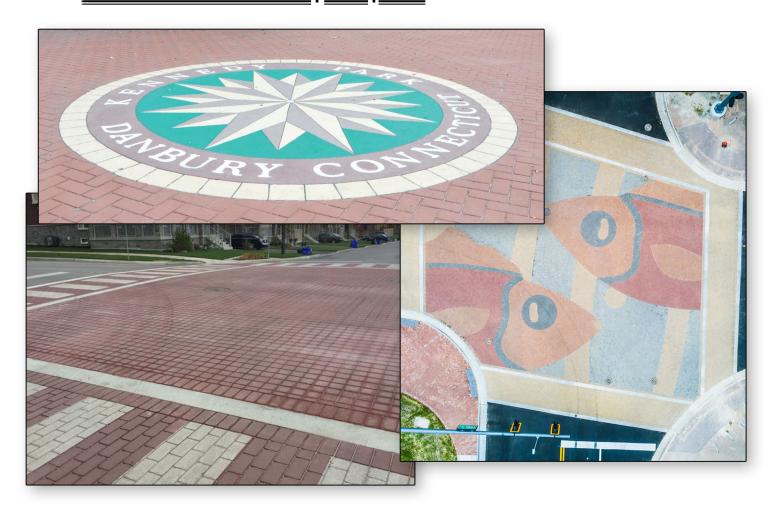
Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida

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Decorative Surfaces Options

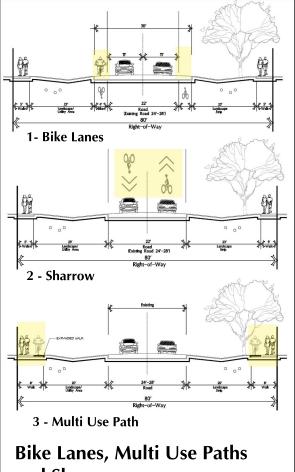
- * 4 Way Stop
- * 1 Way Stop w/ throughway





Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida

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and Sharrows

Bicycle **Options**

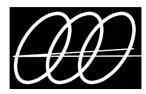
1- Bike Lanes





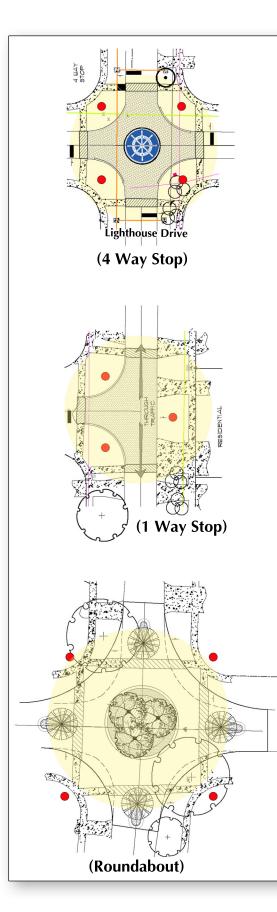


3 - Multi Use Path



Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida

E 6.2.23



Lighting Options (At Intersections)





Lighthouse Drive Traffic Calming Elements N. Palm Beach, Florida

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2023

Lighthouse Drive Traffic Calming Task 1 & 2 Inventory & Analysis



2GHO, Inc. 2/20/2023

Task 1: Inventory

Landscape Architecture report on existing conditions:

The existing topographic survey has been reviewed and a field review has been conducted to evaluate the existing conditions as it relates to hardscape and softscape material along with contextual data. Lighthouse Drive is a local road under the jurisdiction of the Village of North Palm Beach with a posted speed of **25 miles per hour** (mph). For purposes of this review, the 1.463 miles of right-of-way, has been divided into three segments based upon the character of these segments. They are as follows:

SEGMENT #1: Juniper Drive to Prosperity Farms Road: (0.489 miles)

- **Right-of-way:** Width 60 feet
- **Road Surface:** Asphalt with striping centerline (double yellow). No curbing.
- Road Geometry/widths: Centered roadway, Width/23.3 to 23.8 feet
- **Sidewalk:** Both sides continuous, Material/Concrete, Width/5 feet wide
- Bike Lanes: None
- **Landscape Verge:** 13.2 to 13.8 feet and doubles as a drainage swale generally.
- Underground Utilities: Yes see note under Engineering
- **4** Overhead Utilities: None
- **Existing Street Trees:** Primarily palms with no rhythm or species in the planting. Based upon individual lots.
- **Street Lighting:** Single post light at (1), (2) and (3) each. Fully lit intersection at (4).
- Intersections:
 - Through: (1) Gum Tree Road,
 - o All-way stop: (2) Cinnamon Road, (3) Alamanda Drive/Laurel Road,
 - Signalized: (4) At Prosperity Farms Road, divide between Segment #1 and Segment #2

4 Contextual:

- Single Family Residential (75-foot wide lots)
- Apartment Complexes (Pineapple Grove)

Visual Inventory:

This segment of the roadway comprises one-story single-family residential structures and a two-story apartment complex straddling both sides of the road. Most structures were built over 50 years ago and are generally well maintained and give off an Old Florida feel. The landscape is inconsistent from property to property as to building perimeter landscaping, tree canopy coverage, street trees and general maintenance. Tree canopy is light, street trees are primarily palms and occasionally there is a house not kept up to the level of the other properties. The road is not curbed so limits where trees can be planted in the future. This segment feels tight and more enclosed.

Lighthouse Drive Traffic Calming Inventory & Analysis Report

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SEGMENT #2: Prosperity Farms Road to NPB Waterway Bridge: (0.314 miles)

- **Right-of-way:** Width 80 feet
- Road Surface: Asphalt with striping centerline (double yellow) and white stripe on edge (no shoulder). No curbing.
- Road Geometry/widths: Centered roadway, Width/+/-26.8 feet
- **Sidewalk:** Both sides continuous, Material/Concrete, Width/5 feet wide
- **Bike Lanes:** None. Appears to be a shoulder.
- **Landscape Verge:** +/- 23 feet and doubles as a drainage swale generally.
- **Underground Utilities:** Yes see note under Engineering
- **Overhead Utilities:** Yes primarily on south side.
- Existing Street Trees: A few palms plus 2 canopy trees dot this segment of the roadway leaving large runs with no trees.
- **Street Lighting:** Single post light at (5), (6) and (7) each. Fully lit intersection at (4).
- Intersections:
 - Through: (5) Westwind Drive, (8) Lagoon Drive
 - All-way stop: (6) Westwind Drive,
 - Signalized: (4) At Prosperity Farms Road, divide between Segment #1 and Segment #2
- Contextual:
 - Single Family Residential (80-foot-wide lots)
 - Church (Lighthouse Church)
- Visual Inventory:

This segment of the roadway comprises one-story and two-story single-family residential structures and a church complex the corner of Prosperity Farms Road. Most of the one-story structures were built over 50 years ago and are generally well maintained and give off an Old

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> Florida feel. The two-story structures tend to be on the south side of the road on a canal, are newer and built up high. This is also the side where there are overhead wires so limited landscape. The landscape tends to be lusher than Segment #1 but there is still inconsistency along the street. There is a lack of street trees. The road is not curbed so limits where trees can be planted in the future as will the overhead wires.



SEGMENT #3: NPB Waterway Bridge to U.S. Highway One: (0.660 miles)

- **Right-of-way:** Width 80 feet
- Road Surface: Asphalt with striping centerline (double yellow) and white stripe on edge (no shoulder) only near newly renovated Intersection (8). No curbing.
- **Road Geometry/widths:** Centered roadway, Width/+/-28 feet
- **Sidewalk:** Both sides continuous, Material/Concrete, Width/5 feet wide
- 🜲 Bike Lanes: None
- **Landscape Verge:** +/-21 feet and doubles as a drainage swale generally.
- **Underground Utilities:** Yes see note under Engineering
- **4 Overhead Utilities:** Yes between bridge and Intersection (8) Anchorage Drive.
- Existing Street Trees: This area has a preponderance of large mature Mahogany Trees scattered along the roadway. It may have been more consistent in the past.
- Street Lighting: Single post light at (8), (9), (10) and (11) each. Fully lit intersection at Intersection (13) at US Highway One.
- Intersections:
 - Through: (9) Kingfish Road, (10) Fairwind Drive, (12) Alleyway
 - All-way stop: (8) Anchorage Drive, (11) Eastwind Drive
 - Signalized: (13) at US Highway One, end of project
- Contextual:
 - Single Family Residential with larger lots (75-foot to 90-foot-wide lots)
 - Commercial at US Highway One
- Visual Inventory:

This segment of the roadway comprises one-story and two-story single-family residential structures with commercial uses between the alleyway and US Highway One. The properties

Lighthouse Drive Traffic Calming Inventory & Analysis Report

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tend to be well kept up. Some of the houses along the canal have been redone, enlarged and enhanced (between the bridge and Intersection (8) Anchorage Drive. The landscape tends to be green but definite lack of tree canopy in street trees and private property trees. Since the rightof-way is generous there is an appearance of space and openness which possibly leads to increased speeds.



Engineering report on existing conditions:

The existing topographic survey has been reviewed and a field review has been conducted to evaluate the existing conditions and to prepare a report on the existing conditions related to underground utilities and storm drainage facilities within the road right of way.

The focus of the overall project and the various reports that will be prepared will be to determine the constraints and options to provide traffic calming features and opportunities to install landscaping and other beautification elements to this neighborhood street.

The roadway generally consists of two lanes of pavement centered in the road right of way with grassed swales and concrete sidewalks on both sides of the street.

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The overall roadway corridor is congested with underground utilities on both sides of the roadway. Underground utilities consist of potable water and sanitary sewer systems, storm drainage, natural gas and various communication systems including ATT, Comcast (Xfinity) and others. These utilities are primarily located outside the roadway pavement in the grassed swales and under the exiting sidewalks.

There are overhead utility lines within portions of Lighthouse Drive for FP&L and some other utility providers but most of the overhead utility service in the area is within the easements in the rear lots.

A description of the existing underground facilities has been separated into three segments of Lighthouse Drive as follows.

SEGMENT #1: Juniper Drive to Prosperity Farms Road:

- North side of roadway
 - o Water Main
 - ATT from Juniper Drive to Cinnamon Road
 - Storm Drainage from Gumtree Road to Prosperity Farms Road
- South side of roadway
 - o Gas Main
 - o ATT
 - o Sanitary Sewer

SEGMENT #2: Prosperity Farms Road to NPB Waterway Bridge:

- North side of roadway
 - o Gas Main
 - Sanitary sewer
 - o Sewer Force Main
 - Storm Drainage from Prosperity Farms Road to west of Westwind Drive
- South side of roadway
 - o ATT
 - o Crown Cable
 - Water Main
 - Sanitary Sewer from Prosperity Farms Road to Westwind Drive

SEGMENT #3: NPB Waterway Bridge to U.S. Highway One:

- North side of roadway
 - o Gas Main
 - Comcast from Bridge to Anchorage Drive.
 - Sewer Force Main from Bridge to west of Anchorage Drive
 - Sewer Force mains (2) from Eastwind Drive to U.S. Highway One.
 - o Sanitary Sewer

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- Century Link from Fairwind Drive to U.S. Highway One. Exact location to be further determined based on location of underground utilities noted as unknown on the survey. This line may be on the south side of the roadway.
- South side of roadway
 - o ATT
 - Crown Cable from Bridge to Anchorage Drive.
 - o Water Main

Note that there is storm drainage at the intersection of Eastwind Drive and Lighthouse Drive that is meandering and appears to be small drainage lines to address localized ponding at the intersection. Additional information will need to be obtained for these systems.

Note that the majority of the existing utilities identified above are located between the roadway pavement and the road right of way.

Until such time as the topographic survey has been updated depicting all of the existing underground utilities, the areas available for the installation of additional items such as landscaping in the road right of way cannot be further identified and the feasibility of utility relocations to accommodate these additional items cannot be determined.

Utility coordination & markups:

Utility coordination was initiated and the various utility companies have responded with marked up plans and exhibits. FPL is the only utility that has not responded to repeated requests. Refer to Utility Response Status spread sheet.

Provided herewith are the response from the utility companies. See drop box link for files.

https://www.dropbox.com/sh/1lumacozu3dm753/AAAu9K4oeROLkc3gxALAOITLa?dl=0

The survey was reviewed and compared to the utility mark ups and exhibits and the survey will need to be updated in order to depict all of the existing utilities within the right of way. Refer to the "Existing Utilities Inventory for Lighthouse Drive Traffic Calming" exhibit.

Existing Utilities Inventory

The following are the existing utilities and general area of impact:

- 1. ATT (Communications) Buried Fiber and Copper (Entire limits)
- 2. Centurylink (Communications) Buried line (Fairwind Drive to U.S. One)
- 3. Comcast (Communications) Aerial and Buried (Entire limits)
- 4. Crown Castle Fiber (Communications) Buried Main (Prosperity Farms Road to Anchorage Drive)
- 5. FLA Public Utilities Buried Gas Main (Entire limits)
- 6. FPL Power & Light Aerial (Entire Limits)

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- 7. MCI (Communications) Buried HDPE in Rear Lot Easement (Juniper Drive to Prosperity Farms Road)
- 8. PBC Traffic Operations Intersections of Lighthouse Drive and Prosperity Farms Road and Lighthouse Drive and U.S. One.
- Seacoast Utility Authority Water Main, Sewage Force Main and Gravity Sanitary Sewer (Entire limits)
- 10. Teco People Gas Palm Beach No Facilities
- 11. Windstream Communication (Communications) No Facilities

Survey updates required. Utilities not depicted on survey:

- 1. ATT (Communications) Buried Fiber and Copper (Entire limits)
 - Not shown from Juniper Drive to Bridge
- 2. Centurylink (Communications) Buried Line (Fairwind Drive to U.S. One)
 - Not shown or shown as unknown
- 4. Crown Castle Fiber (Communications) Buried Main (Prosperity Farms Road to Anchorage Drive)
 - Not shown from Prosperity Farms Road to Bridge
- 5. FLA Public Utilities Buried Gas Main (Entire limits)
 - Not shown from Juniper Drive to Bridge.
- 9. Seacoast Utility Authority
 - Water Main not shown from Juniper Drive to Bridge
 - Sewage Force Mains
 - \circ $\;$ Not shown from Westwind Drive east to west of Anchorage Drive
 - Not shown from East of Eastwind Drive to U.S. One (10" FM)
 - Not shown from Eastwind Drive to U.S. One (8" FM)

Per direction from the Village, further surveying will not be done as part of this project.

Street Calming Analysis:

Streetscape Development:

The existing topographic survey has been reviewed, a field review has been conducted to evaluate the existing conditions and existing underground utility information has been reviewed relative to locations and potential conflicts with potential streetscape installations.

The analysis and evaluation relating to proposed streetscaping considered the following.

1. Existing underground utility locations including water and sewer systems.

As previous noted during the inventory phase of this project, there are various existing underground utilities and systems located within the roadway corridor. These systems are extensive and provide very limited opportunities to install streetscape within the roadside February 20, 2023

swale/green space without utility relocations to accommodate adequate planting space and separation from the utility and the streetscape.

2. Roadside swale flow line location and drainage conveyance.

Lighthouse Drive roadway consists of generally 23' to 27' of pavement for a two-lane roadway and grassed swales on both sides of the roadway from drainage conveyance. The roadside swale flow line location varies from 7' to 15' from the edge of pavement. The location of the flowline relative to the installation of streetscaping is important to consider to avoid interrupting the flowline and creating blockages in the swale conveyance system.

3. Roadside Safety Clear Zone (FDOT) from edge of travel lane.

The FDOT green book for the design of streets and highways indicates that adequate clear zone shall be provided from the travel lane to obstructions such as streetscape with a trunk diameter greater that 4" in diameter at 6" above ground level.

For streets with posted speed limits less than 40 MPH, a 10' clear zone is required and may be reduced to 7' if the AADT is less than 750 VPD. Therefore, it is assumed at this time that streetscaping must be located at least 10' from the traveled lane line.

Intersection Enhancements:

All intersections with Lighthouse Drive are being considered for surface treatments such as pavers or other patterned special surfaces. The enhancements range from uniformly patterned surfaces with contrasting patterned crosswalks to patterns with the NPB logo and a rotary design at Anchorage Drive.

The majority of the intersections will include just the installation of pavers or specialty surfaces at the same location as the existing pavement geometry with upgraded crosswalks. Some minor geometric changes will be required to accommodate the new surfaces such a radius changes and lane width adjustments. Intersections 2, 3 and 11 will also include the NPB logo in the center of the intersection. These intersection improvements can be accomplished with minor impacts to the existing infrastructure at these locations. Drainage patterns and pedestrian circulation will not be affected.

The intersection at Anchorage Drive (#8) is proposed to be modified to include a traffic circle or rotary with a raised median and directional islands at all four roadway connections to the intersection. This work will require some overhead utility relocations on the sosuthwest corner and changes to the intersection geometry. Other existing infrastructure impacts appear to be minimal to accommodate these changes.

Miscellaneous:

Other locations that are planned to receive pavers or specialty surfaces within the roadway include:

- The approaches to Bridge on the east and west sides.
- Pedestrian crosswalks at:

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- o U.S. Highway One
- Prosperity Farms Road
- Small Medians

Medians:

While the roadway in general, with all the residential driveways, is not conducive to functioning with a center planted landscape median, there are opportunities to provide small median, no longer that 24 or 30 feet with a width of 10 to 12 feet green. On signature palm tree would be planted there. This associated drawings with this submittal indicate where these could occur. From wet to east, the first one would be at the western side of Prosperity as the road widens to create the north bound turn lane. The second one would be east of Prosperity about the same distance from Prosperity as the first one. Both will act as traffic calming gateways. The third area would be the four to the outside of the proposed round-about at Anchorage Drive. The fourth area would be halfway to US One at a place that seems to fit into the alignment and existing trees well. This one will act as an initial gateway for those traveling west from US One.

Bicycle Facilities:

All roadways today should be multi-model, encouraging all users and increasing outdoor health activities as well as being safe for all users.

There are sidewalks along Lighthouse Drive as well as within the whole community as connective tissue. The issue remains that biking is not linked, connected or perceived as safe. The biggest impediments as found in the survey and interviews:

- 1. Perceived speed of roadway for vehicles
- 2. The bridge, which has no facilities for cyclists

There are 3 recommendations as relates to bicycles which the Village may wish to consider in whole or combined with different alternatives. The alternative are as follows:

- 1. BIKE LANES: 4' bike lanes with 11' lanes which makes for a 30' wide paving section. Current road width varies from 23-28'. No curbing would be added and the swales would be maintained.
 - a. Advantages: Relatively easy to execute.
 - b. Disadvantage: widen roadway which is more conducive to speeding.
- 2. SHARED USE PATHS: Add three to five feet to the existing sidewalks to create multiuse paths on both sides of the road.
 - a. Advantages: separates bikes from vehicles except those serious bikers who would be in the road anyway.
 - b. Disadvantage: would have to narrow around existing trees, would need to be of concrete with a dropped footer/curb edge due to swales and maintaining flow.
- 3. SHARROW: This is a shared bicycle and vehicle lane for slow speed roads (under 35 mph.
 - a. Advantages: No physical changes to the roadway or utilities. Sends a clear message that vehicles need to go slowly. Applies to golf carts too.
 - b. Disadvantages: riders still may not use it. Sidewalks will probably still be used by children.

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Landscape Opportunities:

Due to the utility situation, there is limited opportunity for the planting of trees and yet the Village would benefit from more canopy to counteract heat island effect and in reducing carbon. Leaf trees rather than palm trees do a better job of both the above items providing a better eco-service. Our large trees such as Oaks and Mahoganies are also problematic when it comes to disruption of infrastructure, namely sidewalks. Any street trees should be considered Green Infrastructure for the services they provide the community and should have a high value. In addition, street trees have a proven traffic calming effect to the vehicular user. Mature trees are able to canopy over the roadway giving a tunnel effect which calms and slows traffic. To that end, options to consider for this traffic calming exercise:

- 1. TREES IN MEDIANS OR CENTER: Trees planted in the center of the current roadway have little to no conflicts with underground utilities.
 - a. Advantages: Will take away from the appearance of a wide open roadway which encourages speeding. Unifying aesthetic since it cannot be done on the side of the road.
 - b. Disadvantages: Does not shade the pedestrians. Will need irrigation.
- 2. TREES IN SELECTED AREAS: A concept would be developed to look at where large trees would make a strategic impact. Once agreed and identified, then the Village could take the planting of one on as capital improvements over time. Agreements would need to be made with owners to have agreements to irrigate them.
 - a. Advantages: Achieve a more consistent streetscape. Increase shade opportunities for pedestrians.
 - b. Disadvantages: Costly to move underground utilities.
- 3. TREE PROGRAM FOR HOMEOWNERS: This would be a program where the Village would supply and possibly help plant shade trees in resident's front yards upon a maintenance agreement.
 - a. Advantages: Not a Village tree. Potential shade for pedestrians.
 - b. Disadvantages: Relies on homeowner resident to participate. For Lighthouse Drive only, would this be considered dissimilatory? Will not shade the road in most probability.

Golf Carts

Golf carts are permitted within the Village boundaries as defined by code. Through the survey and the interviews, there is a mixed bag as to response to them. It was brought up that maybe there is a certification program that the Village puts on to register the vehicles (to get a sticker, to make sure lights are angled correctly) and to go over the rules and regulations. Motorized bikes may also fall into this category. If the Village functions for golf carts than it should be good for motorized bikes.

Public Survey

A public survey was developed and released through the Village's web site. There are no controls which would define or limit who answers. It is not a statistically valid survey. It should be noted that the Village using the web site to communicate with the community. Having a public survey allows the public to voice their opinions early on in the process. The findings of the survey can be found in Attachment A.

An executive summary of the survey:

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- 1. Do you live on or within one block of Lighthouse Drive?
- 2. How many times do you travel by vehicle Lighthouse Drive
 - a. Never
 - b. Less than once a month
 - c. Once a month
 - d. Once a week
 - e. Once a day
 - f. Two-five times a day 50%
 - g. More than 5 times a day
- 3. How often do you travel on Lighthouse Drive by bicycle?
 - a. Never 49%
 - b. Once a month
 - c. Once a week
 - d. Once a day
 - e. Two-five times a day

4. This question is about riding a bicycle on Lighthouse Drive. Please pick the answer that best describes your experience?

0%

- a. I don't ride a bicycle in the village 38%
- b. I try and avoid Lighthouse drive when I cycle
- c. I ride mostly on the roadway edge
- d. I ride mostly on the sidewalk <mark>28%</mark>
- e. I ride or walk with children on bikes 7%
- 5. Do you ever travel Lighthouse Drive with a boat and trailer? 26% Yes
- 6. This question is about walking, jogging or running on Lighthouse Drive. Please choose the answer that best describes your experience:
 - a. I don't walk, jog or run on Lighthouse Drive 33%
 - b. I am out for exercise.
 - c. I am out with children for play. 13%
 - d. I am alone when using the sidewalk.
 - e. I use sidewalks to go shopping. 2%
- 7. How many times do you walk, jog or run on Lighthouse Drive sidewalks?

a. Never 28%

- b. Less than once a month
- c. Once a month
- d. Once a week
- e. Once a day
- f. Two-five times a day
- g. More than 5 times a day
- 8. What do you like best about Lighthouse Drive, whether you travel it by car, bike, or on foot?
 - a. It's the most direct path to get to where I am going 75%
 - b. The bridge. 7%
 - c. The trees and landscape. 4%
 - d. Nicely maintained homes 8%
 - e. Other
- 9. What bothers you about Lighthouse Drive?

46% Yes

23%

1%

52%

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- a. Speed of cars
- b. The bridge.

32%

- c. Concern about pedestrian safety d. Not enough shade for sidewalks 4%
- e. Nothing 28%
- f. Other_____
- 10. What would you propose to be done to Lighthouse Drive to make it better? Select all that apply:
 - a. Add decorative paving at intersections 20%
 - b. Add decorative cross walks 24% c. Add shade trees 31% d. Add decorative street lights. 26% e. Add traffic calming elements in the roadway **44%**
 - f. Other
- 11. For roadway traffic calming elements, which would be your first two choices for the Village to look into:

a.	Round-abouts	
b.	Raised tables	<mark>36%</mark>
c.	Chicanes (physical modifications to create gentle curves	s in road)
d.	Medians	<mark>19%</mark>
e.	Speed humps	<mark>36%</mark>

SUMMARY OF WRITTEN COMMENTS:

ITEM - CONCERNS	
TRAFFIC	
Speeding concerns	
Traffic control by police increase	#
Traffic volume concerns	LIII
Delivery truck issues - blocking traffic	11
Enforcement rather than modifications	1
Enforce golf cart rules	
CONCERNS	
Safety for pedestrians & bikers	LIII II
Pretty good as is (and/or don't spend the money)	
Less car dependent solutions – safety for children	1
Golf carts – like	Y-N-N-N
Don't do any further traffic calming	1
Don't like any of the suggested traffic calming	
BRIDGE	
Bridge safety issues	LIII-II
Limit bridge traffic	1

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Raise the bridge	
New Bridge	LIII I
Remove bridge	++++ +++
Overweight vehicles using the bridge	
Convert bridge to tunnel	
Close bridge to cars/trucks. Keep for pedestrians, golf carts & emergency vehicles	1
ROADWAY	
Make the road safer	1
Golf Carts – concerns with children driving & other	II
Stop sign rollers	II
Fix Northlake to take away Lighthouse Dr. traffic	
Reduce speed lower than 25 mph	
SPECIFIC IDEAS AND ELEMENTS	
Roundabouts	Y-Y-Y-Y-N-N-Y-N-Y-Y-Y
More shade / landscape	++++-N-
More stop signs	III
More lighting (safety)	III
Medians	Ν
No traffic calming elements	1
Blinking warning sign (hidden driveways)	1
Speed humps	Y-N-N-N-Y-Y-N-Y-N-Y-N-Y
Dedicated bike lanes	++++
Close Lighthouse to commercial use	
Widen sidewalks	LIII

Interviews

Interviews were done with the Chiefs of Police and Fire along with all the Council Members during the month of January 2023.

Police: Chief Richard Jenkins

- Survey: remember that it was not a statistically valid survey.
- Roundabout make sure fire apparatus can maneuver.
- Without the bridge, it would calm streets, lessen crime and increase waterfront property values
- Would support narrowing and speed tables.

Fire: Chief JD Armstrong

• From the council point, the Village needs a unified front to move forward.

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- Physical items
 - Mountable curbs
 - Speed tables (not humps)
- Bicycle and roundabouts issues note as sharrow
 - Serious cyclists use lighthouse only to get somewhere else. They are more comfortable on US One.
 - Bridge is constricting/limiting for cyclists.
- Bridge solution: single span draw bridge operated remotely from the Parker Bridge.
 - If bridge came out then would need another fire station on the west side.
- Supports Geo grid and alternate stabilization techniques.
- Directional bores requested all the time for utilities and 5 different gas companies.
 - Need 5 years of permits to get the idea.

COUNCIL MEMBERS

Council Member Debbie Searcy, Mayor:

- Strongly supports a roundabout.
- Trees on private property program
- Bridge is problem with bicycles
- Work with golf carts as they are here to stay.
- Sharrow
- Traffic calmed community signage,
- Ships wheel in paving
- Loves tables.

Council Member David Norris, Vice Mayor:

- Traffic too fast
- Major east-west corridor
- Better bike lanes
- Golf carts:
 - Concern with safety
 - Likes concept small town feel
 - \circ $\;$ Lots of carts on LHD $\;$
- No speed bumps, maybe speed tables
- Canopy trees come with problems.

President Pro Tem Susan Bickel:

- Widen sidewalks to include bicycles
- More landscape
- Make sure that the public has buy in
- Roundabout yes
- Lower speed limit to 20 mph

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- Ships wheel logo in paving
- Delivery truck issues

Council Member Mullinex:

- Make US One and Northlake better so that it becomes the desirable way to go.
- Widen sidewalks so can bicycle on them.
- Speed tables ok as long as there are no issues

Council Member Darryl Aubrey:

- Primary goal: calm traffic
- Street calming
 - Stop signs
 - o Bumps
 - Golf Carts: concerned with safety. Children should be seat belted
 - Limit number of occupants
 - Adjust lights
 - o Unlicensed vehicles
 - Suggest a program where the cart and operator are certified through the Village with a sticker.
- Bicycle issue
 - o Road is not safe for cyclists
 - Need wider bike lanes but then traffic would go faster.

Traffic Analysis

A traffic analysis was done and is attached to this report. Speed studies were done in Segment 1 (west location) and Segment 3 (east location). The testing proved the assumption that there is speeding along the roadway justifying this report and design exercise. Segment 1 has a speed limit 10 mph over the posted 25 mph speed limit at the 85th percentile. Segment 3 has a 5 mph over in the 85th percentile.

The service volume standards were met for the Level D roadway.

Please see further detailed information in the attachment.

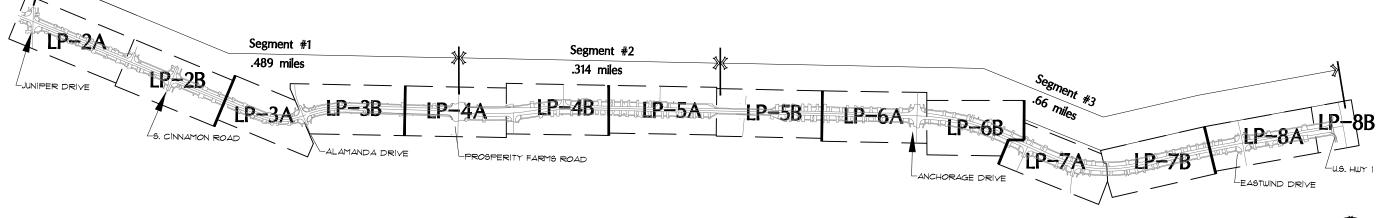
Early Findings:

- Survey update needed to locate missing utilities underground. For this endeavor, the Village will not be providing any further underground utility survey.
- There is one bike sign westbound west of US 1: however, there are no bicycle lanes and no sharrow pavement markings. This is potential hazard which should be corrected.
- The 4-Way Stop intersections should have an add-on plaque of 'ALL WAYS'.



Lighthouse Drive Roadway Improvements

Lighthouse Drive from Juniper Drive to US1 North Palm Beach, Florida (1.463 miles)







Posted Speed: 25 MPH



Scale: N.T.S.

	Sheet Title:	Sheet No.
v & Analysis s & Constraints	Sheet Index	LP-1
31.23		18-1016

