



## EXHIBIT A

# **Technical Memorandum** ***Review of Impacts from Proposed SR-A1A Widening***

**Date:** November 30, 2022  
**CMA Proj No.:** 431.029  
**Client:** Town of Palm Beach - Department of Public Works

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### **Project Background**

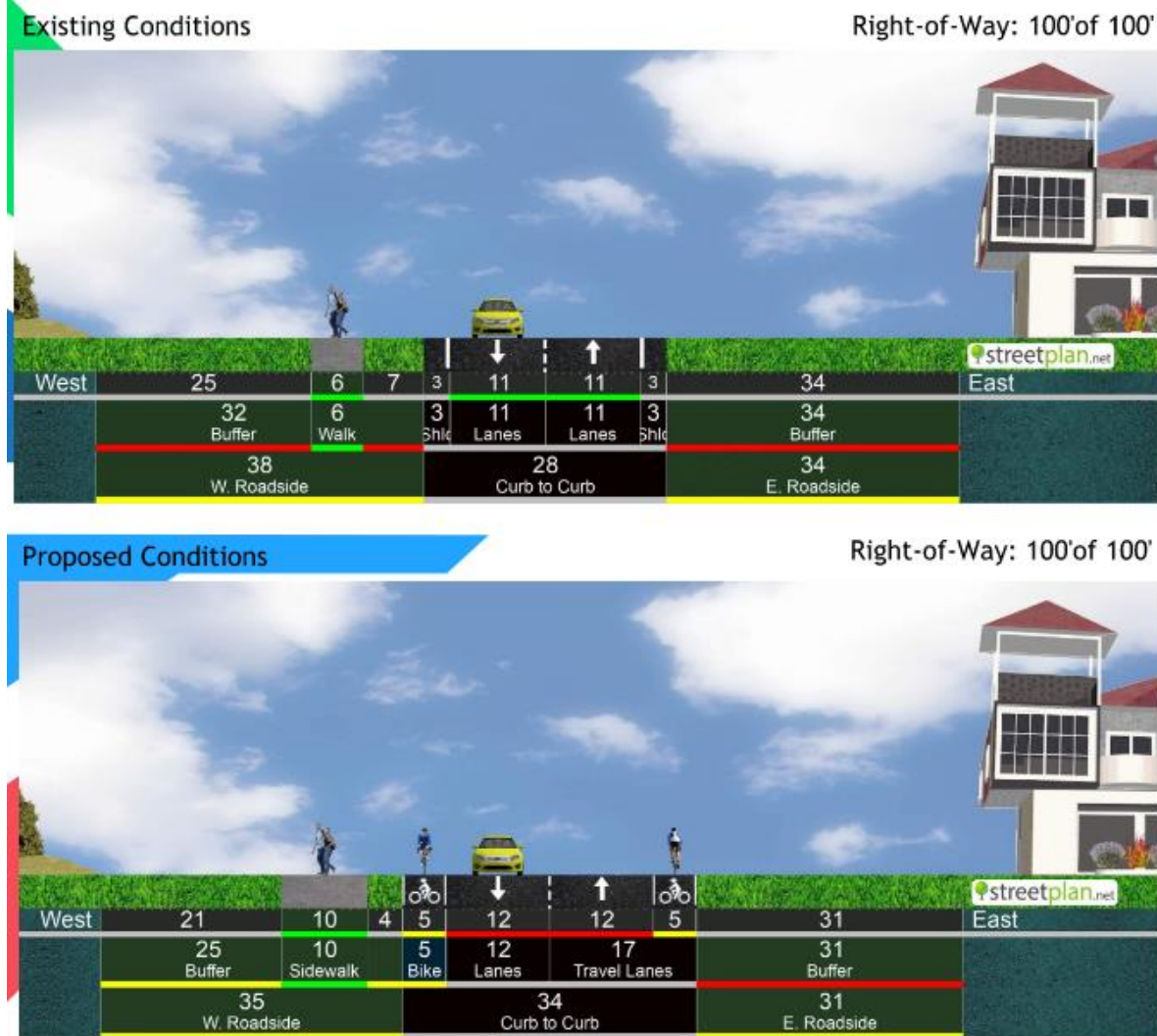
In 2021, the Palm Beach Transportation Planning Agency (TPA) conducted a study of potential improvements to better accommodate bicycles and pedestrians along the SR-A1A corridor. To facilitate implementation of the identified improvements, the TPA looked for opportunities to pair the improvements with coincident Florida Department of Transportation (FDOT) roadway resurfacing projects. During this effort, the TPA identified fourteen (14) improvement projects between the City of Boca Raton and the City of Riviera Beach where pedestrian and bicycle improvements could be made alongside proposed FDOT roadway projects. One of the FDOT projects identified by the TPA is in the Town of Palm Beach, south of Sloans Curve.

On June 2, 2022 the FDOT presented their proposed improvements for project FM #4476631 which is a resurfacing project titled "A1A FROM SOUTH OF LAKE AVE TO N OF IBIS WAY". The identified schedule for the work is Construction in 2025. According to the FDOT Five-Year Work Plan, there are no other projects currently programmed immediately to the north or south of the project identified with the exception of a drainage maintenance improvement on SR-A1A at Sloans Curve in 2023 (FM# 4400092).

At the June workshop members of the Town Council, Town Staff, and residents of the Town attended to express their displeasure with the proposed typical section which included the following elements:

- Increase the width of the roadway from 28-ft to 34-ft by
  - Increasing the width of both north and southbound travel lanes from 11-ft to 12-ft
  - Increasing the width of both north and southbound shoulders from 3-ft to 5-ft
- Increase the width of the paved pedestrian path from 6-ft to 10-ft
- Decrease the western landscaped area from 25-ft to 21-ft
- Decrease the grassed swale between the path and the roadway from 7-ft to 4-ft
- Decrease the eastern landscaped area from 34-ft to 31-ft

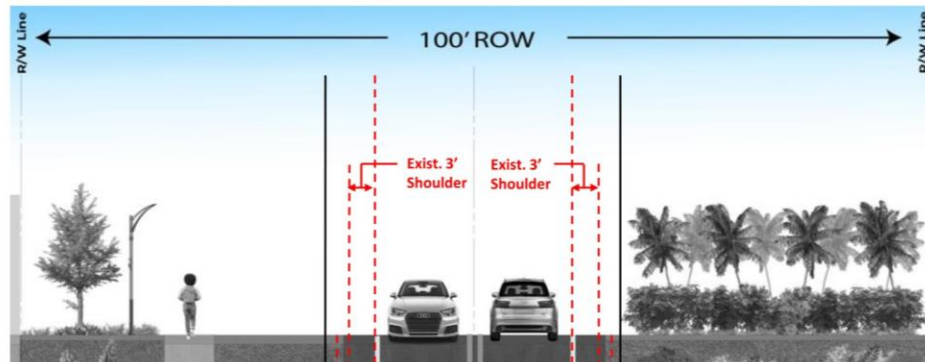
The following exhibit from FDOT and the TPA illustrates the differences between the existing and proposed roadway typical section presented in June 2022.



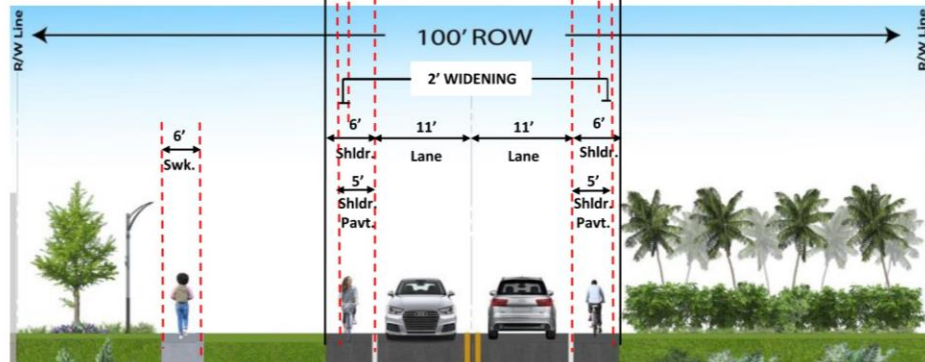
Following the June 2022 workshop, alternatives to the design were considered by FDOT staff. On October 10, 2022, the Town's Public Works Department had a follow-up meeting with the FDOT which concluded with the possibility of a shared use path for bikes and pedestrians in the green space along this corridor instead of incorporated with the roadway. FDOT recognized that there is only a pathway on the west side of the roadway which is different than their typical shared use path configurations, but they are considering a modification to their typical condition for this case. The new proposed improvement would still include widening the path from 6-feet to 10-feet.

FDOT is also proposing to widen the roadway shoulder by 2-ft in both directions as part of the revised configuration. This would create a 5-ft wide paved shoulder instead of the current 3-ft shoulder. When comparing the conceptual plan revision to the original proposed improvements, the main difference is the roadway width is decreased by 1-ft on each side. FDOT provided the exhibit below to illustrate this change (proposed widening of the path not included). The revised plan is a conceptual revision; no design drawings have been prepared.

**EXISTING  
CONDITIONS**



**PROPOSED  
IMPROVEMENTS**



The other significant change from the original proposal is with the proposed pavement marking plan. The FDOT staff discussed applying new pavement marking to the path on the west side of the road to indicate it is a “shared use path” for pedestrians and bicyclists. Also discussed was not including bicycle lane markings in the newly widened shoulders.

**Investigation of Potential Impacts**

As part of the due diligence to determine the potential impacts of the proposed improvements, the Town procured the services of CMA to investigate the widening of the roadway and paved path on adjacent facilities owned by either the Town or private entities. Utilizing survey files from previous projects along the corridor, CMA prepared exhibits comparing the existing and proposed pavement limits. In addition, CMA performed field measurements during site visits to quantify the extent of the potential impacts. These investigations identified the following types of impacts:

- Landscaping (sodded swales, hedges, flower beds)
- Specialty driveways
- Specialty signage
- Privately-owned irrigation equipment
- Drainage infrastructure
- Utility infrastructure

A detailed description for each type of impact is included below.

## ***Landscaping***

The largest impact of the proposed improvements to landscaping is to the sodded swales. The removal of approximately 6-ft of sod on the west side of the corridor and 2-ft of sod on the east side of the corridor removes approximately 1.4 acres of grass along the roughly 1.5-mile project. Approximately 0.3 acres of the sod removed is along the Town's Par 3 Golf Course. This is an improvement from the original plan of 0.4 acres for the full corridor and 0.1 acres for the golf course segment.

In addition to the removal of sod, there are hedges and shrubs that will be impacted by the proposed improvements. As shown below, at 2500 South Ocean Blvd, there is a sea grape hedge that is immediately adjacent to the roadway on the east side. This hedge is used by the condominium association to hide landscape debris that has been trimmed and is waiting for pickup by the Town's waste collection crews. The proposed improvements would require removal of the hedge and possible relocation farther back.



*Hedge at 2500 South Ocean Blvd*

At 2770 South Ocean Blvd there is a large sea grape that is approximately 6 feet from the edge of pavement. Although the tree may not necessarily need to be removed, it is expected to be impacted by the construction of the potential improvements considering the roots typically extend to the drip line of the canopy which is near the existing edge of pavement.





*Seagrape at 2770 South Ocean Blvd*

There are two locations where existing flower beds will be impacted by the proposed improvements. At 2760 and 2780 South Ocean Blvd there are flower beds that would require removal or relocation based on the proposed improvements.



*Flower Bed at 2780 South Ocean Blvd*



*Flower Bed at 2780 South Ocean Blvd*

There are several locations where hedges and plant material that is not highly maintained will be impacted in areas that are relatively under-developed. An example of this is on the west side of the roadway across from the condominiums at 2580 and 2600 South Ocean Blvd, where the existing vegetation is along the strip of land between the roadway and the shoreline of the Lake Worth Lagoon.



*Hedge along the west side of SR-A1A*

### ***Specialty Driveways***

The majority of the driveways along the proposed project corridor are asphalt and as such will not be significantly impacted by the proposed improvements. There are however four locations where specialty driveways are installed that will be impacted by the proposed widening of asphalt pavement. The types of driveways impacted are either stamped concrete or pavers. The specialty driveways that will be impacted are shown below:



*Driveway at 2300 South Ocean Blvd*



*Driveway at 2660 South Ocean Blvd*



*Driveway at 2760 South Ocean Blvd*



### ***Specialty Signage***

There are two locations where private condominium signage that has low voltage up-lighting will be impacted by the proposed widening of the path on the west side of the roadway. The signage at 2773 South Ocean Blvd is surrounded by a green island ficus hedge and would need to be completely relocated west based on the proposed alignment. The signage at 2860 South Ocean Blvd would need to be relocated to the west as well as the accompanying low-voltage lighting.



*Lighted sign at 2773 South Ocean Blvd*



*Lighted sign at 2860 South Ocean Blvd*

### ***Privately Owned Irrigation Equipment***



Because privately owned irrigation equipment is difficult to identify without subsurface exploration, it is difficult to identify directly in the field the locations of sprinkler heads, valves, and irrigation piping. However, considering the healthy condition of the sod and the regular maintenance activities observed, it is anticipated that there are existing irrigation systems that extend to the edge of the existing pavement at each of the condominium locations. All of these systems would have to be modified during construction to accommodate the new pavement limits.

### ***Drainage Infrastructure***

Since this portion of SR-A1A is a FDOT roadway, the drainage system is owned and operated by the State agency. It is assumed that the increase in pavement will also increase the runoff generated after rainfall events and as such may require the construction of additional drainage infrastructure. The existing system includes drainage catchbasins and inlets along the west side of the roadway that will need to be retrofit to accommodate the proposed improvements. Below are examples of FDOT drainage inlets that will need to be raised to match the new grades and retrofitted to provide a safe walking surface for pedestrians on the new path.



*FDOT Catchbasin in front of 2860 South Ocean Blvd*

### ***Utility Infrastructure***

There are several locations where existing electrical pullboxes, water meters, and other general utility appurtenances will require relocation or retrofit by the FDOT to accommodate the proposed improvements. The retrofits could include upgrading the box type from a fiberglass box to a concrete box to provide H-20 traffic loading. Other facilities may require complete relocation. The cost of these efforts is typically born by the utility as part of their permitting agreements with FDOT to be within the right-of-way. Below are examples of utility elements that will require retrofit or relocation. Notably, none of the new streetlights will be impacted by the proposed widening.



*Existing Communications Utility Panel*



*Existing Water Meter and Irrigation Valve Boxes*



*Existing Communication Pullbox*



*Existing Street Lighting Pole*



### **Summary of the Conceptual Plan Revision**

In summary, the effect of the conceptual revision of the original FDOT proposal is a widening of the total roadway by 4-ft instead of 6-ft. This reduction in the proposed widening is achieved by maintaining the width of the existing travel lanes at 11-ft. The conceptual revision and the original plan both include a 5-ft paved shoulder on each side of the roadway and a 10-ft wide path on the west side. The other primary difference in the conceptual plan revision is in the pavement marking plan, where the new proposal would show bicycle markings only on the pathway and not on the roadway shoulder. The impacts of the roadway project to existing landscaping, utilities, and other facilities along the corridor are expected to be roughly the same as the original proposal, with the only difference being that the total increase in impervious area is reduced by roughly 20%.