



SR 80 Lighting Justification Report

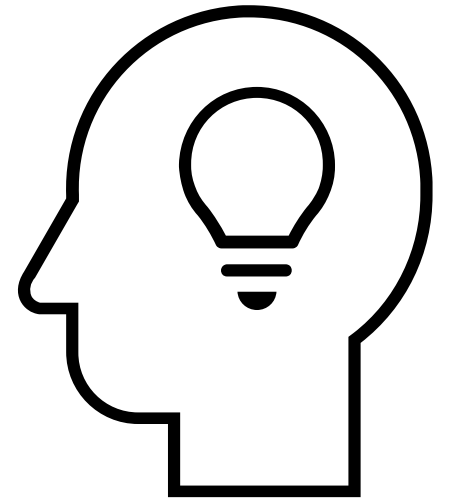
**FROM SR 15/ US 441 (MP 0.000) TO CR 880 (MP 18.210)
PALM BEACH COUNTY, FLORIDA**

Financial Project ID: 441756-I-32-01

TPA PRESENTATION September 17, 2020

Agenda

- **Project Location Map**
- **Previous Safety Study Recommendations and Implementations**
- **Funded Intersection Lighting**
- **Intersection Lighting Limits**
- **Typical Conditions for Lighting Installation**
- **2020 Crash Analysis**
- **Benefit/Cost Analysis**
- **Contacts**



Project Location Map





Previous Safety Studies Recommendations and Implementations

Recommendation	Status
Milling and resurfacing	Completed 2016/2018
Guardrail installation and extension	Completed 2012
Shoulder widening	Completed 2016
Median crossover signs	Completed 2016
Curve ahead, chevron signs and closely spaced RPM	Completed 2016
Fog detection system	Completed 2016
Signal improvements including backplates, new lenses, longer red intervals	Completed 2016
Audible and Vibratory Pavement Markings	Completed 2018
Intersection lighting upgrade at SR 700	Completed 2018
Intersection lighting at SR 15/US 441, W Sugar House Rd and Hatton Hwy	To be completed in March 2021

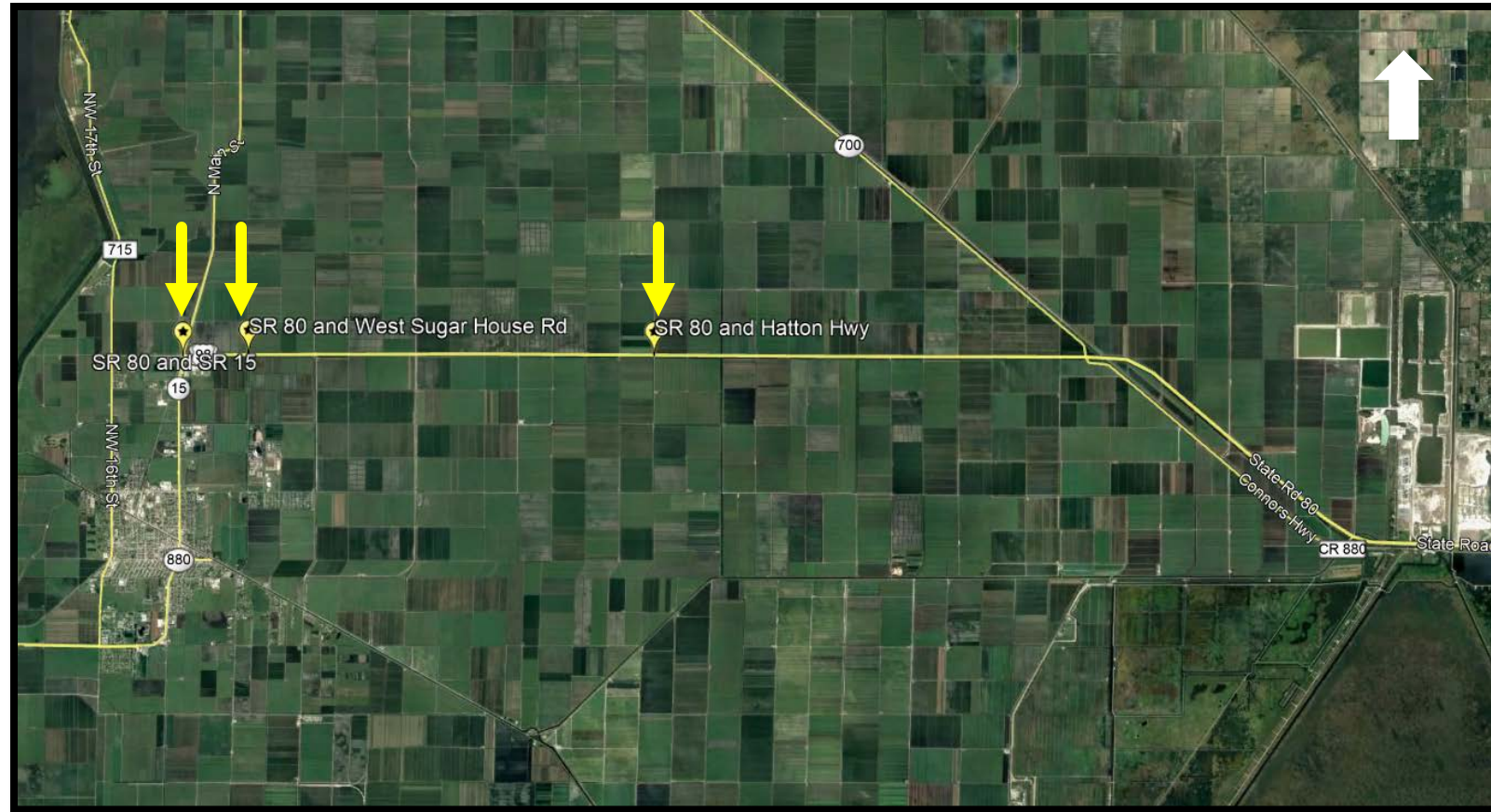
Funded Intersection Lighting

- SR 80 at SR 15/
US 441

FM# 446832-1-52-01
- SR 80 at West
Sugar House
Road

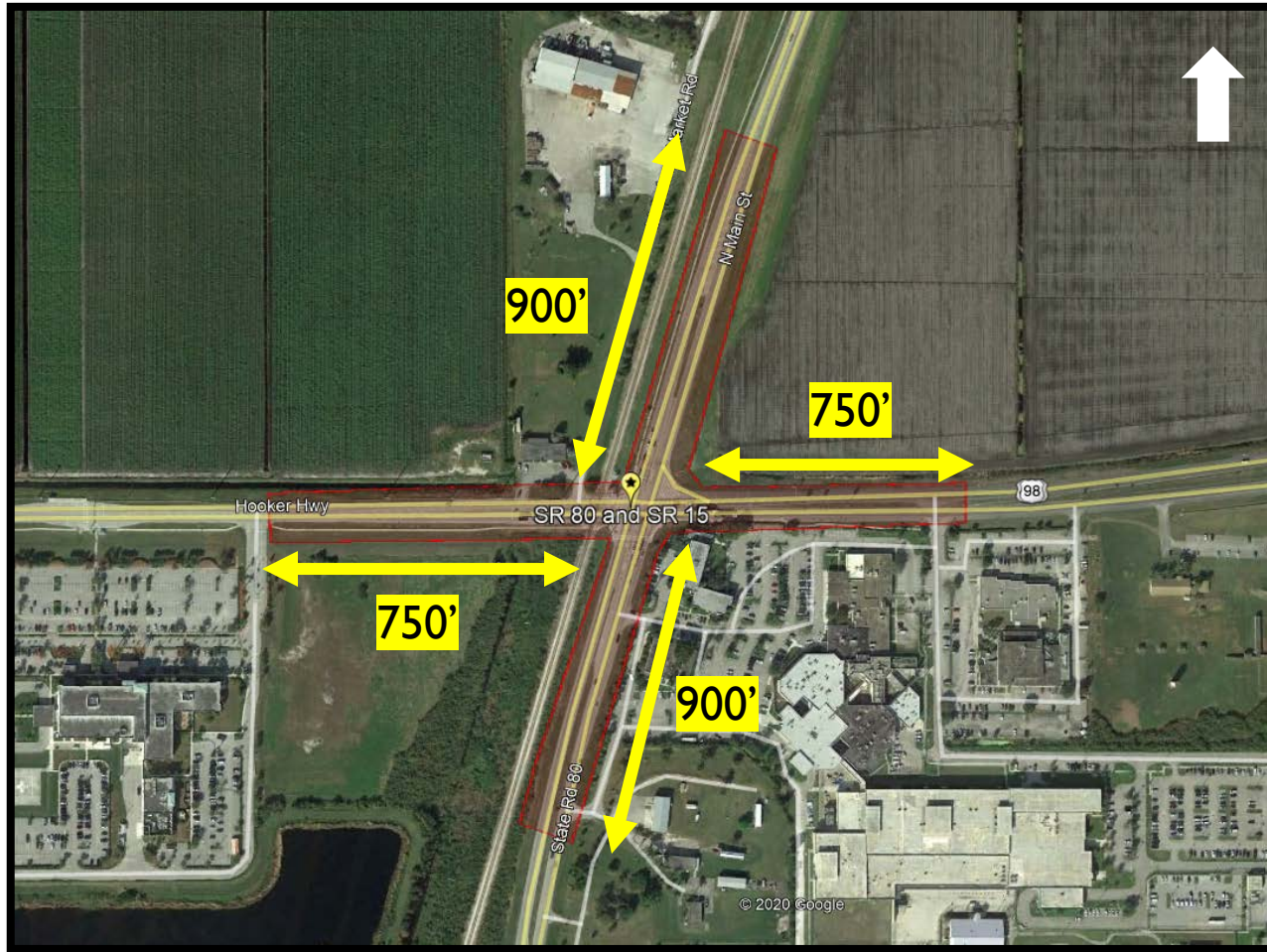
FM# 446832-3-52-01
- SR 80 at
Hatton
Highway

FM# 446832-2-52-01



Construction expected to be completed by March 2021

Intersection Lighting Limits



SR 80 and SR 15



SR 80 and Sugar House Rd



SR 80 and Hatton Hwy

Typical Conditions for Lighting Installation

	<u>True for SR 80?</u>
<ul style="list-style-type: none"> ▪ Urban corridors and transition to urban areas <ul style="list-style-type: none"> ➤ Are there lots of conflicts at the edges (sidestreets, driveways, etc.)? 	No
<ul style="list-style-type: none"> ▪ Emphasize pedestrians and bicyclists <ul style="list-style-type: none"> ➤ Are there sidewalks along the roadway? ➤ Are there any midblock crossings? ➤ Are there marked crosswalks? 	No No No
<ul style="list-style-type: none"> ▪ Are there other obstacles near the road? 	No
<ul style="list-style-type: none"> ▪ Are there 2x more crashes at nighttime vs. daytime? 	No
<ul style="list-style-type: none"> ▪ Are nighttime crashes greater than statewide average of 30%? 	No
<ul style="list-style-type: none"> ▪ Installation of lighting is evaluated from a safety perspective using the above metrics <ul style="list-style-type: none"> ➤ Locations are prioritized based on the needs due to limited resources. 	

2016 - 2020 Crash Analysis

▪ Purpose

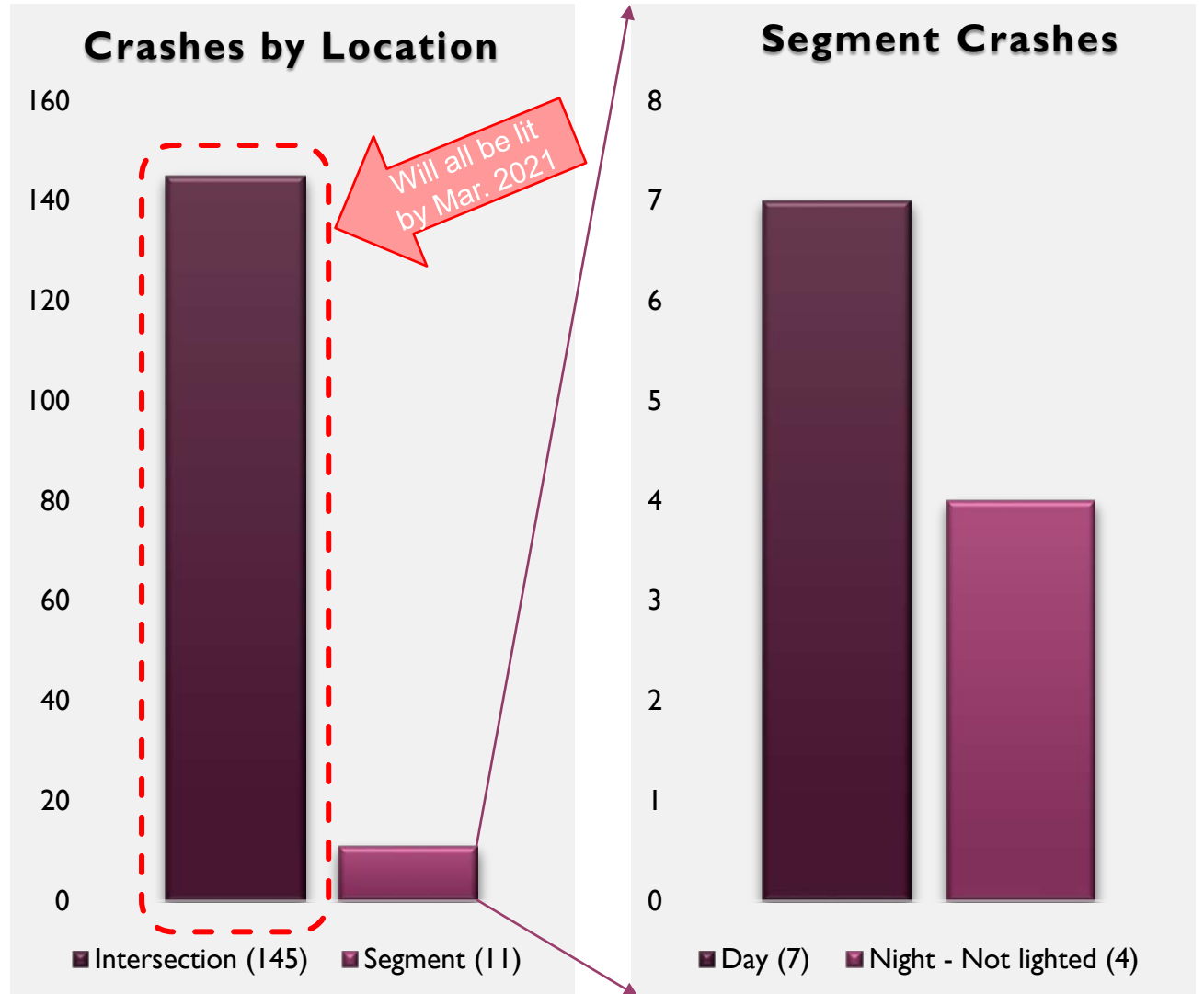
- Analyze if corridor-wide lighting is warranted and justified.

▪ Crash Data Collected

- Signal Four Analytics
- April 2016 to January 2020 (Pre COVID-19)

▪ Results

- 156 crashes occurred
 - 93% (145) occurred at intersections
 - 7% (11) occurred away from intersections
 - 2.5% (4) were nighttime away from intersections
- Statewide average nighttime crashes = 30%
- SR 80 corridor average nighttime crashes = 2.5%



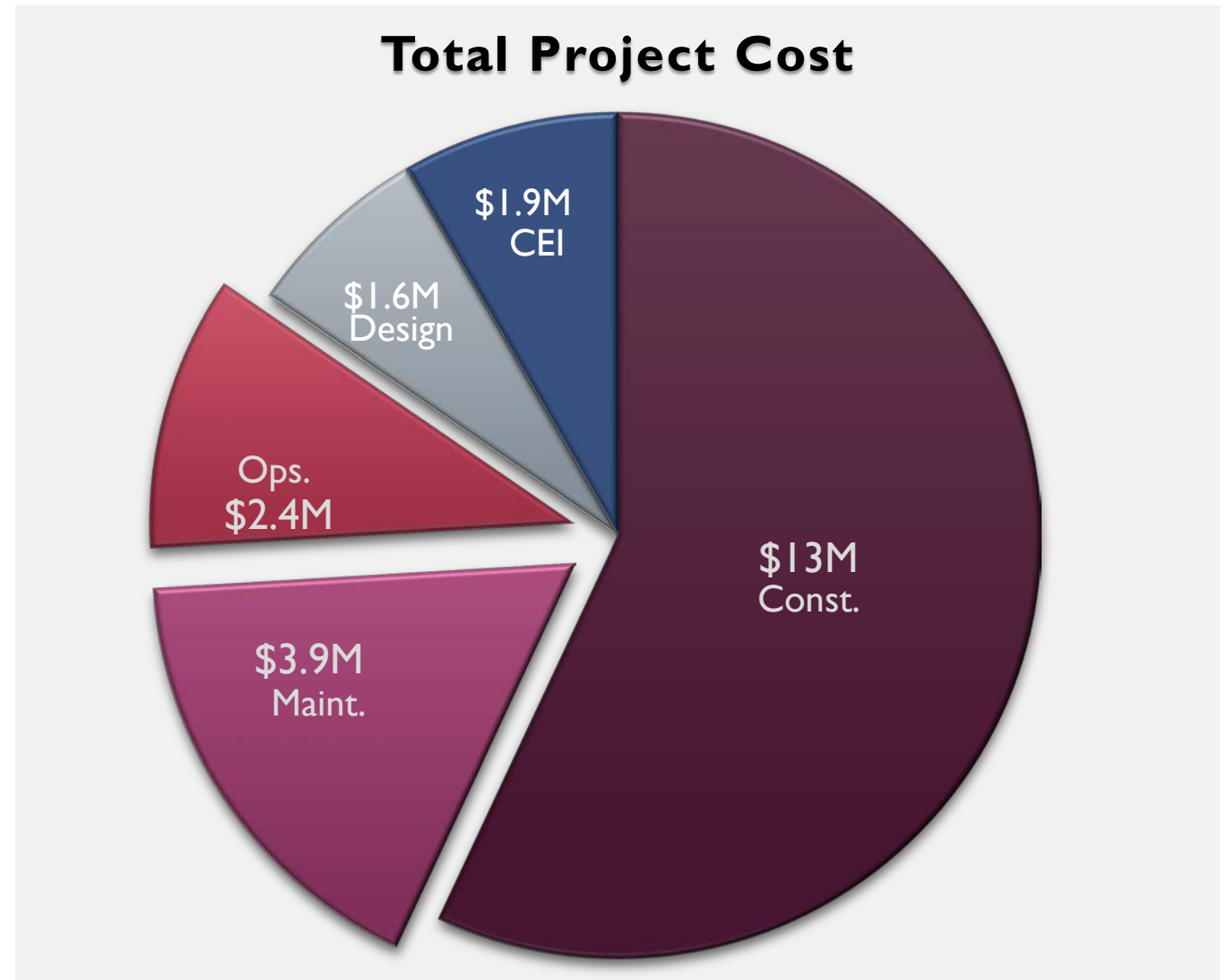
Benefit/Cost Analysis

- **Estimated Project Cost: \$16.52M**
 - Design: \$1.6M
 - Construction: \$13M (977 light poles)
 - CEI: \$ 1.9M

- **Estimated Operation and Maintenance Cost:**
 - O&M for 20 years: \$6.3M (~\$315,000/yr.)

- **Project Benefit-Cost (B/C) Ratio: 0.70**
 - In High crash locations, $B/C \geq 1.0$
 - In all other locations, $B/C \geq 2.0$

- **Corridor-wide lighting is not warranted nor justified from a safety perspective.**





Contacts

FDOT
District Traffic Design Engineer

Anna Plegachova, P.E.
FDOT, District 4
(866) 336-8435, extension 4458

Anna.Plegachova@dot.state.fl.us

FDOT
Communications Manager

Guillermo Canedo
FDOT, District 4
(866) 336-8435, extension 4302

Guillermo.canedo@dot.state.fl.us

Thank You