ROADWAY IMPROVEMENT PLANS

The roadway improvement plans were developed based upon data collection, field reviews, the goals of St. Johns county and engineering analysis. The goals of St. John County were to address the safety, traffic and drainage concerns while minimizing right of way acquisition. Connelly and Wicker, Inc. has prepared a conceptual roadway design based on the following typical sections shown on Sheets 46 and 47. The roadway improvement plans are based on four (4) typical sections - two within a 66 foot right of way and two within a 100 foot right of way. Two of the typical sections consists of two twelve foot (12') travel lanes, two five foot (5') paved shoulders, five foot (5') sidewalk on both sides of the road and an open (swale) drainage system within a 66' right of way and within a 100' right of way. The other two typical sections consist of two twelve foot (12') travel lanes, varying widening for proposed turn lanes, shoulder or bicycle lanes, two five foot (5') paved shoulders, five foot (5') sidewalk on both sides of the road and an open (swale) drainage system within a 66' right of way and within a 100' right of way.

The existing right of way along Wildwood Drive varies from 66' to 100’. At the request of St. Johns County our roadway improvement plans are designed to minimize right of way acquisition. The only areas we are proposing right of way purchases are either drainage related or where we are widening to add turn lanes. Right of way need to be purchased at the cross drain locations where we are extending or replacing existing cross drains and also at the proposed pond location. To keep right of way acquisitions to a minimum there are also some locations where we are proposing retaining walls.

The traffic evaluation determined several locations that warranted a left turn lane along Wildwood Drive under year 2023 conditions. There were no locations that warranted a right turn lane under year 2023 conditions. The locations were a left turn lane was warranted are as follows: a northbound left turn lane with a 100 foot storage length at S. Winterhawk Drive/Maris Drive; a southbound left turn lane with a 100 foot storage length at S. Winterhawk Drive/Maris Drive; a westbound left turn lane with a 100 foot storage length at Carter Road; a westbound and an eastbound left turn lane with 100 foot storage length is warranted at Hicks Drive; a westbound left turn lane with a 100 foot storage length at Oak Lane and a westbound left turn lane with a 100 foot storage length at Moultrie Oaks Subdivision. The entrance to St. Johns Academy was evaluated and though not warranted a left turn lane was recommended. The proposed left turn lanes are shown on our roadway improvement plans.

The safety evaluation determined a need for improvements on Wildwood Drive at the intersection to US-1. The highest concentration of accidents along Wildwood Drive occurred at this location. To improve safety a 4’ raised median is proposed on Wildwood Drive at US-1. The median will prevent drivers traveling west on Wildwood Drive to make a left hand turn into the gas station on the corner as well as preventing drivers trying to make a left out of the gas station and travel west on Wildwood.

The safety evaluation also determined a need for improvements to the existing superelevation along the curves on Wildwood Drive. Only one curve along Wildwood Drive meets the 2% minimum cross slope requirement per the Florida Department of Transportation. The roadway improvement plans show the locations were the superelevation need to be corrected to meet the minimum 2% cross slope requirement.

<table>
<thead>
<tr>
<th>Location of Superelevation Correction</th>
<th>Existing</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 15+01.87 to Station 19+65.39</td>
<td>0.5 to 2.2%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Station 46+22.54 to Station 49+25.09</td>
<td>0.3 to 2.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Station 64+31.77 to Station 72+97.38</td>
<td>0.3 to 3.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Station 92+63.38 to Station 96+90.94</td>
<td>0.7 to 1.9%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

The safety evaluation also determined the existing guardrails were a cause of accidents. There are existing guardrails along Wildwood Drive at locations where the drainage warrants them either a cross drain headwall is in the clear zone or the ditch slopes are steeper than 4:1. In the roadway improvement plans all existing guardrail to be removed by either extending the cross drains and relocating the headwalls out of the clear zone or piping the deep ditched section to eliminate the steep head slopes.

Throughout Wildwood Drive there are overhead electric poles that will need to be relocated due to pavement widening.

The existing drainage system on Wildwood Drive consists of cross drains, side drains and swales. The swales will remain throughout the project with the exception of the last 400 feet of Wildwood Drive at US-1. It is proposed to switch to a curb and gutter section though this area to stay within the right of way when the right turn lane, raised median and sidewalk are added. We have proposed one pond location to accommodate for stormwater treatment for the curb and gutter section.

The existing cross drains along Wildwood Drive were also evaluated and either extended or replaced. If the existing cross drain was CMP then we are proposing to replace it with a new RCP pipe. The remaining cross drains were extended to push their headwalls out of the clear zone which enabled us to remove existing guardrail. There are also proposed baffle boxes shown at all cross drains to add to stormwater treatment.

The following list shows the locations of the proposed baffle boxes:
- Station 42+80
- Station 44+60
- Station 70+80
- Station 111+20
- Station 118+10
- Station 115+44
- Station 153+83
- Station 167+70
- Station 169+67
- Station 196+00

The project was broken into four phases for implementation. Phase 1 begins at Station 153+50 and ends at Station 206+00. Phase 2 begins at Station 103+25 and ends at Station 153+50. Phase 3 begins at Station 63+30 and ends at Station 103+25. Phase 4 begins at Station 10+00 and ends Station 63+30.
ROADWAY IMPROVEMENT PLANS

MILLING
MILL EXISTING PAVEMENT (1.5” DEPTH)

RESURFACING
FRICITION COURSE -- 9.5 S.P.
(1.5” DEPTH)

NEW CONSTRUCTION
FRICITION COURSE -- 9.5 S.P.
(1.5” DEPTH)

TYPE S.P. -- 12.5 STRUCTURAL COURSE (3” DEPTH)

10” LINNEROCK BASE COURSE
LBR 102/88E MAXIMUM DENSITY PER AASHTO T-180
PRIMED ENTIRE WIDTH

12” STABILIZED SUBGRADE
LBR 40/88E MAXIMUM DENSITY PER AASHTO T-180

66’ R/W TYPICAL SECTION
TWO—LANE

PROPOSED ROW
(WAVES)

EXIST. GROUND

5’ SIDEWALK

EXISTING 66’ R/W

WIDENING
(WAVES)

EXISTING TRAVEL LANE
RESURFACING

5’ SIDEWALK

EXIST. GROUND

5’ SIDEWALK

66’ R/W TYPICAL SECTION
TWO—LANE WIDENING

PROPOSED ROW
(WAVES)

EXIST. GROUND

5’ SIDEWALK
ROADWAY IMPROVEMENT PLANS

100' R/W TYPICAL SECTION
TWO-LANE

100' R/W TYPICAL SECTION
TWO-LANE WIDENING

MILLING
MILL EXISTING PAVEMENT (1.5" DEPTH)

RESURFACING
FRICION COURSE — 9.5 S.P.
(1.5" DEPTH)

NEW CONSTRUCTION
FRICION COURSE — 9.5 S.P.
(1.5" DEPTH)

TYPE S.P. — 12.5 STRUCTURAL COURSE (2" DEPTH)

10" LIMESTONE BASE COURSE
L.B. 100/95 MAXIMUM DENSITY PER EASHTO T-180
PAVED ENTIRE WIDTH

12" STABILIZED SUBGRADE
L.B. 40/95 MAXIMUM DENSITY PER ASHTO T-180

1.02

12" WIDENING

1.02

5' SIDWALK

EX. GROUND
ROADWAY IMPROVEMENT PLANS
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ROADWAY IMPROVEMENT PLANS

LEGEND:
- PAVEMENT:
- CONCRETE SIDEWALK:
- PROPOSED R.O.W.

- STORM WATER TREATMENT AREAS:
- SUPERELEVATION CORRECTION:

- PROPOSED TREATMENT AREA
- PROPOSED SIDEWALK
- EXISTING R.O.W.

- PROPOSED TURN LANE
- PROPOSED SIDEWALK
- PROPOSED PAVEMENT WIDENING FOR SHOULDER AND BIKE LANE
- PROPOSED PAVEMENT WIDENING FOR SHOULDER AND BIKE LANE

MATCHLINE STATION 74+00
MATCHLINE STATION 84+40

GRAPHIC SCALE

0 25 50
1 inch = 50 ft.
ROADWAY IMPROVEMENT PLANS
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Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 10'

13+00

29+00

17+00

33+00

21+00

37+00

25+00

41+00
ROADWAY IMPROVEMENT PLANS

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 10'
ROADWAY IMPROVEMENT PLANS
ROADWAY IMPROVEMENT PLANS

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 10'

177+00

181+00

184+00

185+00

186+00

187+00

188+00

189+00
ROADWAY IMPROVEMENT PLANS

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 10'

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