

Transportation Planning Division

TINY ROAD RCA STUDY
Board of County Commissioners
Work Session

January 7, 2025



Presentation Outline

- Overview
- Existing Conditions
- Recommended Improvements
- Public Engagement and Schedule
- Summary





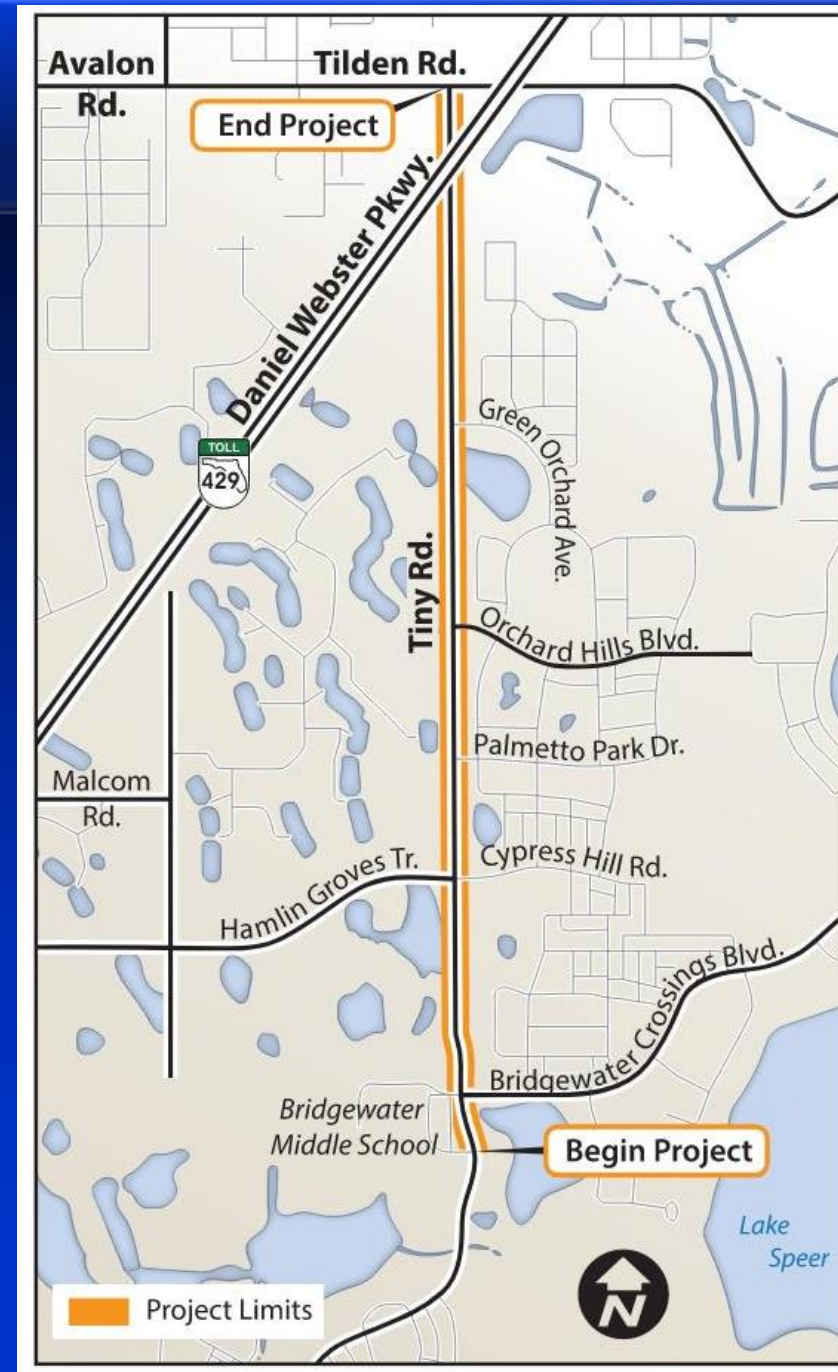
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Overview

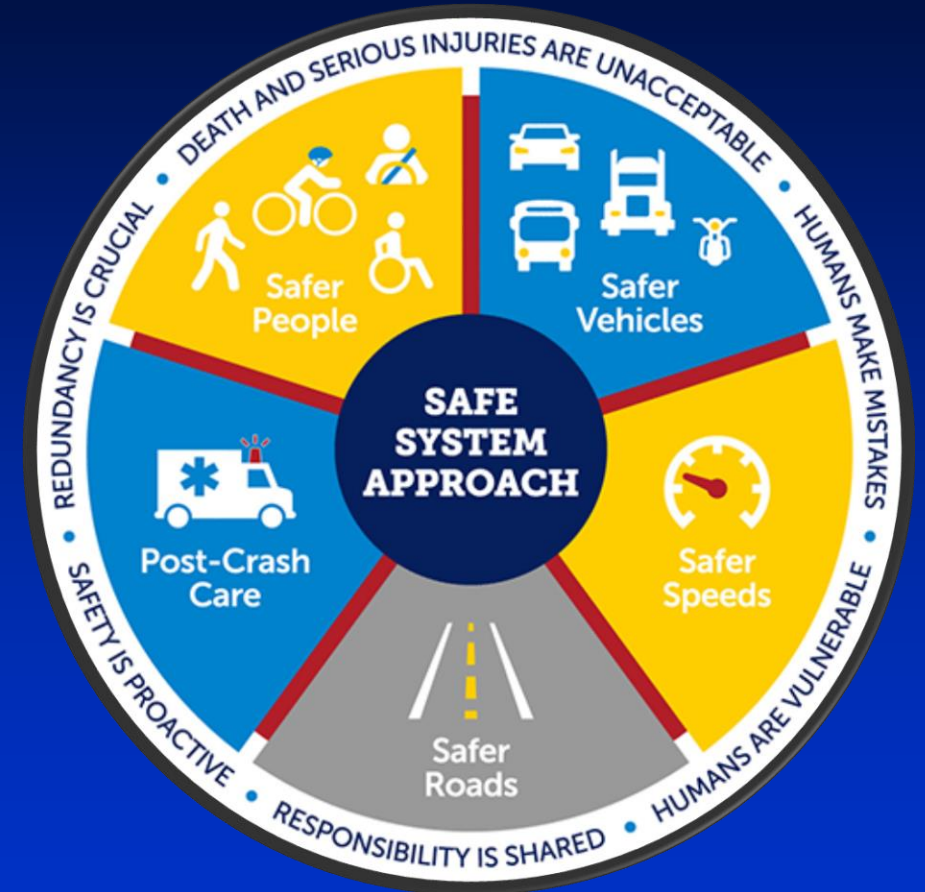
- Tiny Road is on Orange County's Long Range Transportation Plan.
- The study begins at the Bridgewater Middle School southern property line and ends at Tilden Road - Approximately 1.9 miles.
- The corridor is mostly residential on the east side and bordered on the west by the Water Conserv II property for the majority of the corridor.



Overview

Identify Improvements

- Document Project Need
- Balance Needs of all users
 - Safety
 - Mobility
 - Comfort
 - Connectivity





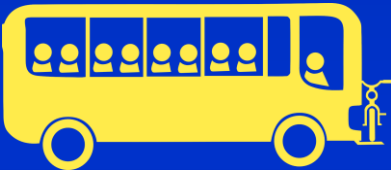
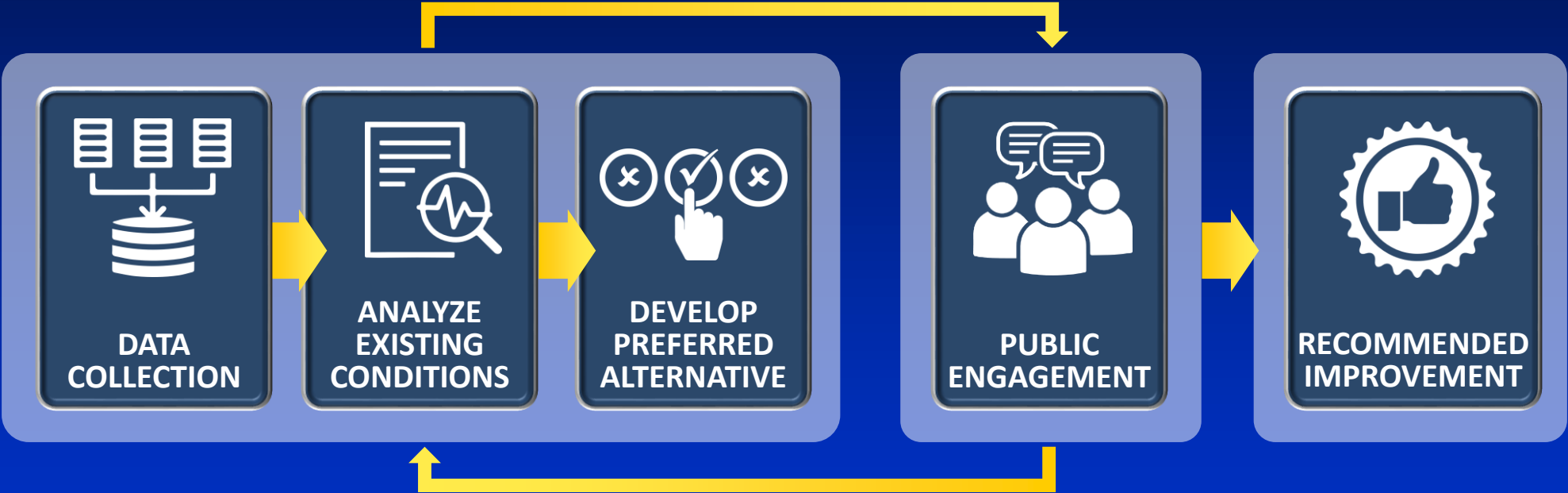
Overview

The alternatives for this Study were developed in keeping with the Vision Zero objective: eliminate all traffic fatalities and severe injuries by the year 2040 while also increasing safe, healthy, equitable mobility for all.





VISION ZERO
CENTRAL FLORIDA
Counting down to zero traffic deaths

Study Process





Overview

| Alternatives Considered | Advantages | Disadvantages |
|---|---|--|
| <p>4 Lane Widening</p>  <p>South of Bridgewater Middle School</p> | <p>Manages congestion and creates safer streets by channeling traffic east at the recently improved Hamlin Grove Trail intersection to discourage traffic from taking a short cut to New Independence Parkway past Bridgewater Middle School and into street front oriented neighborhoods with on-street parking.</p> | <p>Significant cost and right of way acquisition.</p> <p>Traffic analysis shows a 4-lane widening is not warranted</p> <p>Creates the feel of a major arterial rather than a pleasant, pedestrian and bicycle friendly neighborhood connector.</p> |
| <p>2 Lane Complete Street</p>  <p>Tiny Road</p> | <p>Separation of travel lanes reduces risk of head on crashes and creates a pleasant boulevard.</p> <p>Wide multiuse paths on both the east and west sides to facilitate pedestrian and cyclist traffic and to connect the Horizon West Trail to the proposed regional park and library occupying the entire southwest corner of Hamlin Groves Trail and Tiny Road.</p> | <p>Costs are higher than the No-Build option.</p> |



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Existing Conditions

Roadway Geometry and Characteristics

- Tiny Road is a paved two-lane roadway with flush unpaved shoulders.
- The alignment has several hills throughout the northern portion of the corridor that limit sight distance.
- There is an existing 10' Horizon West Trail on the east side from the southern limit of the project to the south side of the SR 429 overpass.





Existing Conditions

Community Features

Schools

- Bridgewater Middle School
- Keene's Crossing Elementary School
- Foundation Academy
- The Goddard School of Winter Garden

Churches

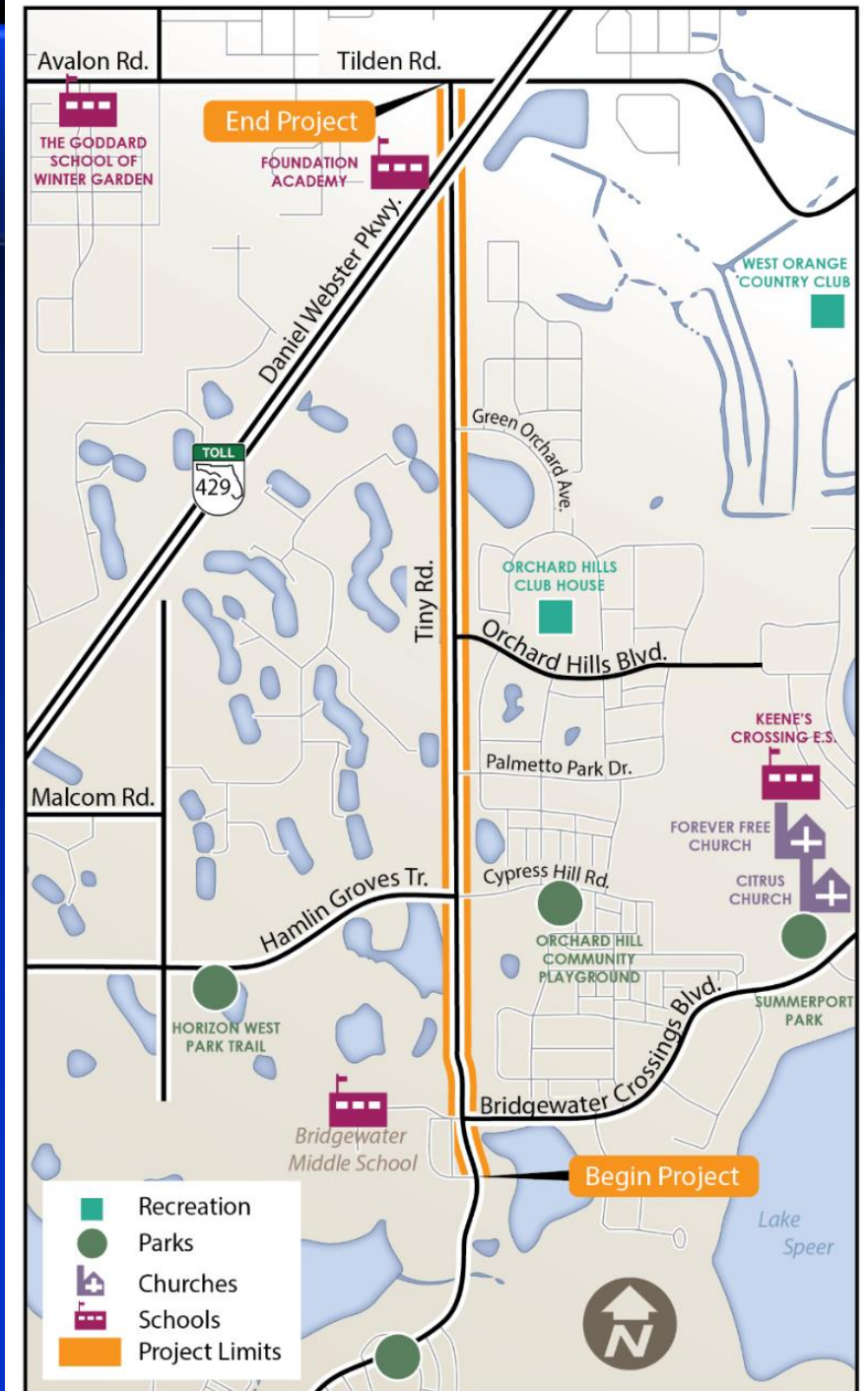
- Forever Free Church
- Citrus Church

Parks

- Summerport Park
- Horizon West Park Trail and future Horizon West Regional Park
- Orchard Hill Community Playground

Recreation

- West Orange County Club
- Orchard Hills Club House

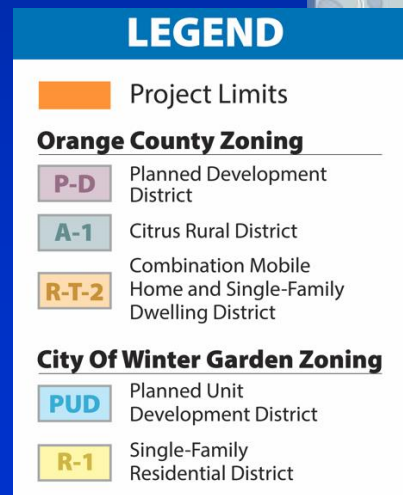




Existing Conditions

Land Use

- West side of Tiny Road largely consists of land owned and utilized by Water Conserv II, an Orange County/City of Orlando water reclamation program.
- East side of Tiny Road is predominantly single family residential.





Existing Conditions

Drainage

- Southern half of the project shown here is in the SFWMD jurisdiction and consists of 2 basins: Basin 1 and Basin 2. The existing ponds are highlighted.

Southern Drainage Basin Map (SFWMD)



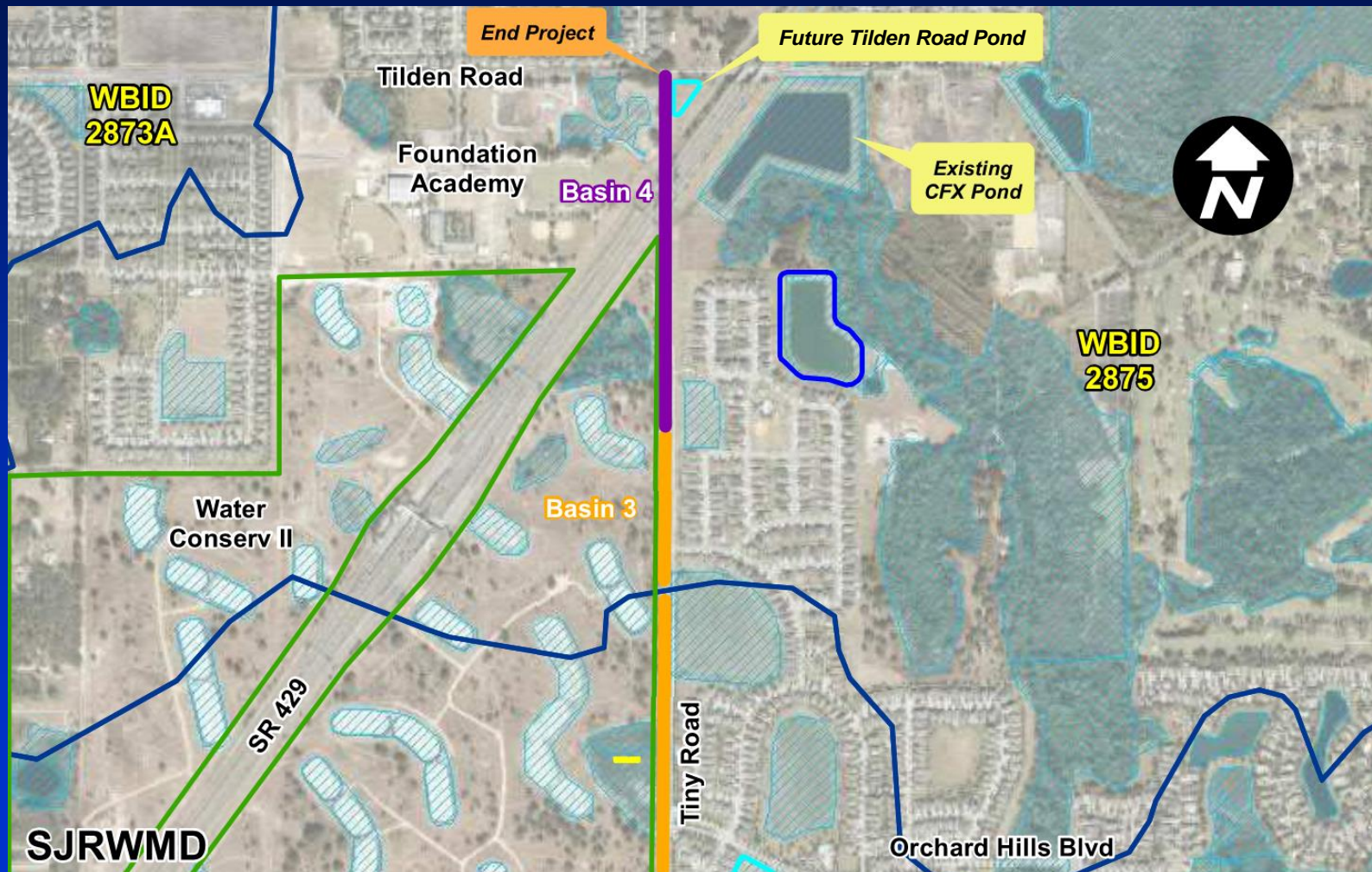


Existing Conditions

Drainage

- Northern half of the project shown here is in the SJRWMD jurisdiction and consists of 2 basins: Basin 3 and Basin 4. The existing ponds are highlighted.
- Requires SJRWMD special basin criteria for the Ocklawaha River Hydrologic Basin, Wekiva Recharge Protection Basin, and the Lake Apopka Hydrologic Basin.

Northern Drainage Basin Map (SJRWMD)





Existing Conditions

Existing Environmental Assessment

- Wetland impacts are expected to be minimal.
- No protected species were observed in the study corridor; however, habitat was noted with the potential to support listed species:
 - Gopher tortoise, Eastern Indigo snake, snail kite, sand skink, Florida sandhill crane, wood stork, little blue heron, tri-colored heron, American alligator, and Florida pine snake.
- Surveys for protected wildlife species will be performed during design.
- No historic buildings or archaeological sites were identified.

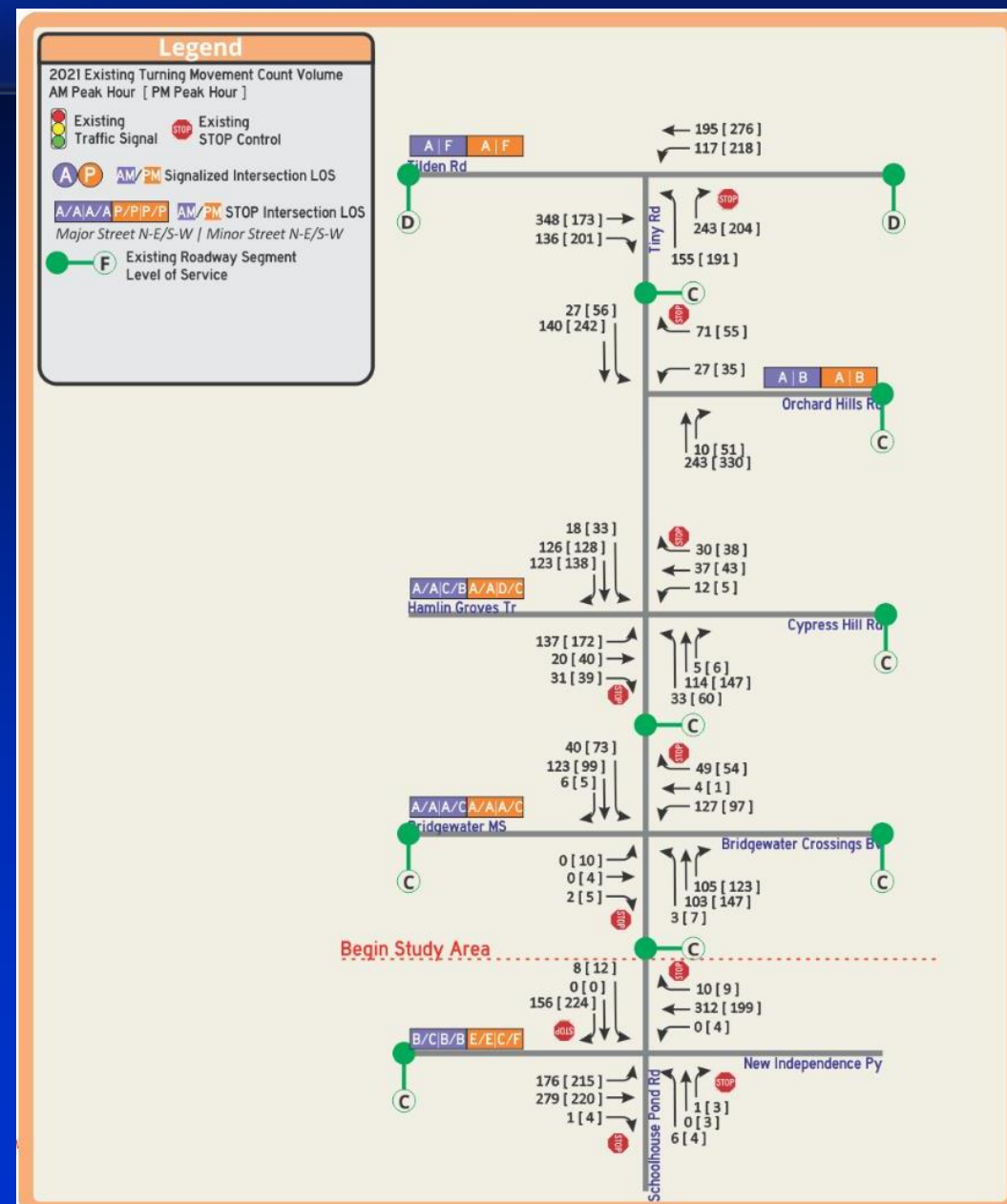




Existing Conditions

Traffic Analysis – Build Conditions

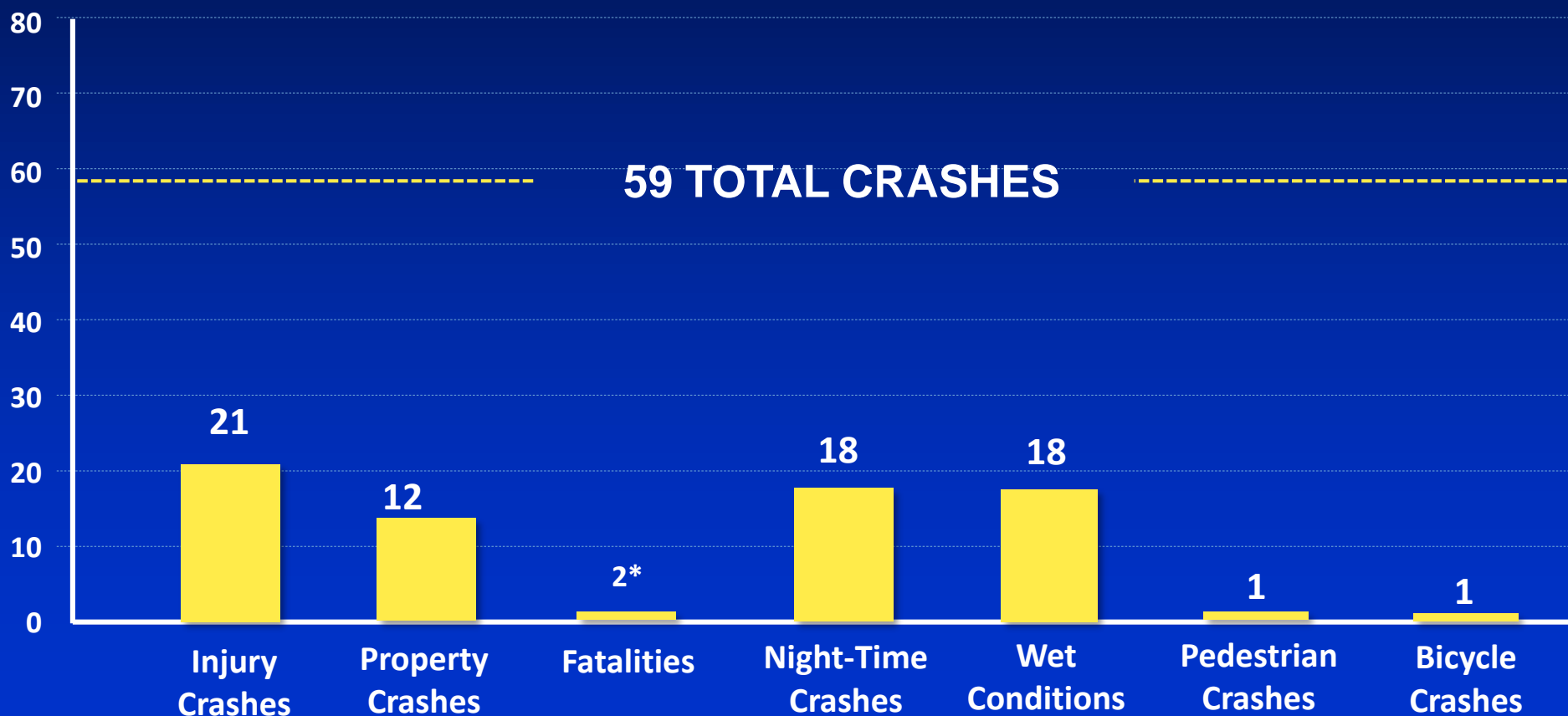
- Existing Year Average Annual Daily Traffic (AADT) Volume: 9,000
- Opening Year 2028 AADT: 13,700 LOS C
- Mid-Design Year 2038 AADT: 20,300 LOS C
- Design Year 2048 AADT: 26,700 LOS F
- Existing Level of Service (LOS) = C, or Stable Traffic Flow
- Pedestrian/Bicycle Counts Along Tiny Road (7am-7pm)
 - 37 Pedestrians
 - 18 Bicyclists





Existing Conditions

Safety and Crash History Seven-Year Period 2015 – 2021



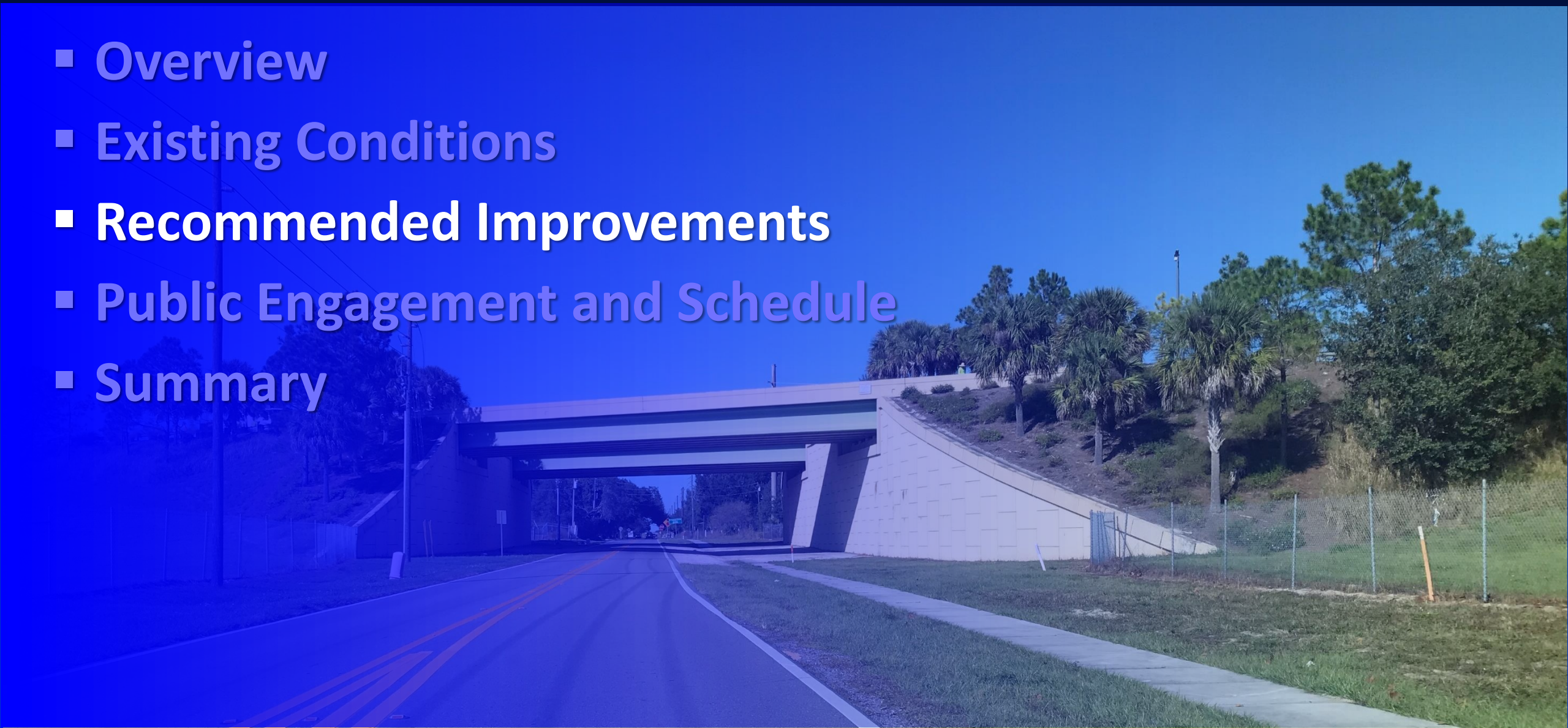
Note: Some crashes are included in more than one category.

*Most recent fatality was added to the crash history.



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Recommended Improvements

Roundabouts

- Roundabouts have fewer conflict points compared to conventional intersections.
- Roundabouts promote slower speeds at a continuous flow through intersections and along the corridor as a whole.
- Crash severity can be reduced compared to conventional intersections.
- Pedestrians only have to cross one direction of traffic at a time as they traverse a roundabout.





Recommended Improvements

Pedestrian Hybrid Beacon (PHB)



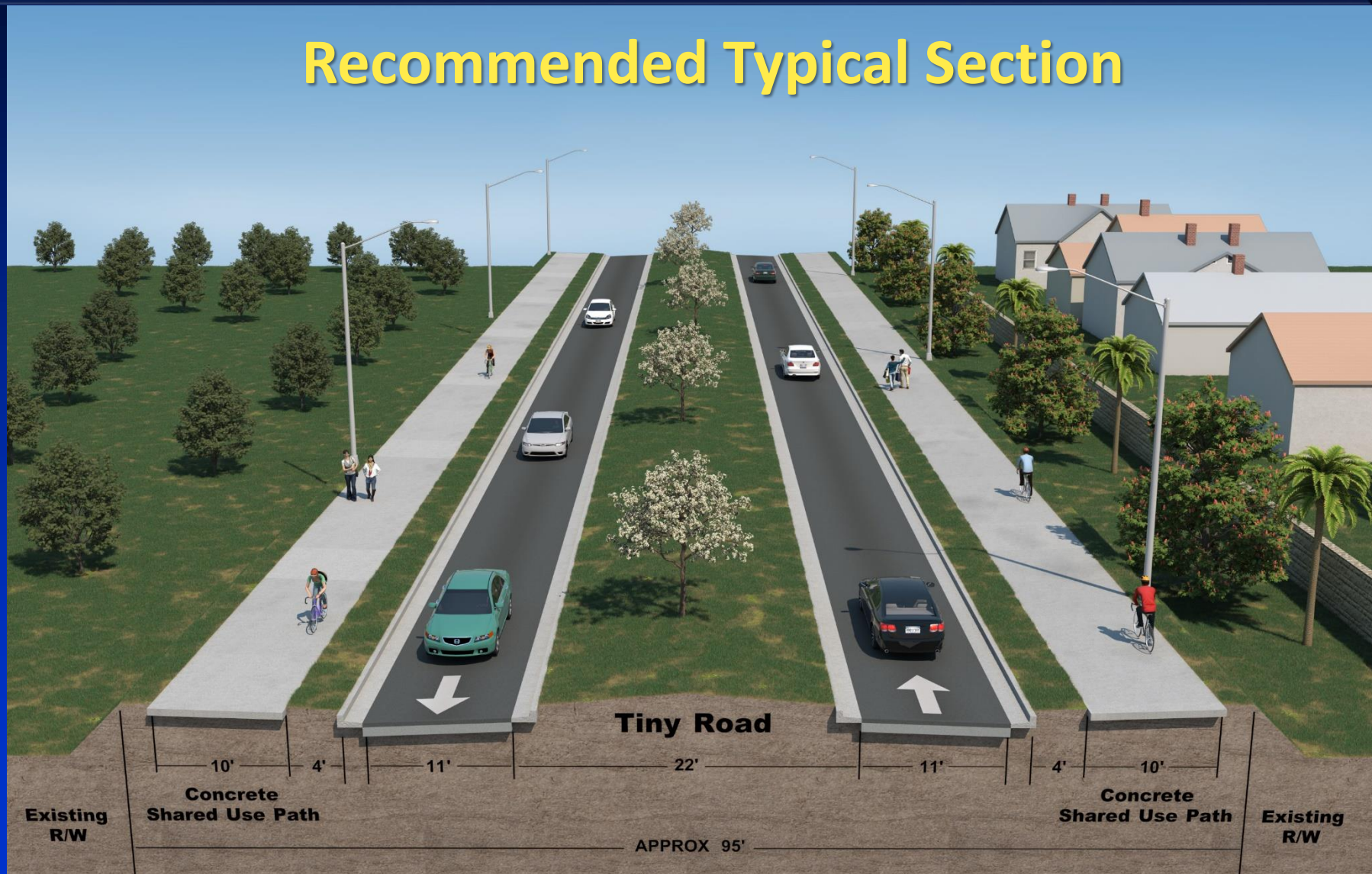
- PHBs remain dark until activated by someone waiting to cross the road.
- They can help increase driver attention to pedestrians crossing the roadway and reduce rear-end collisions.
- The red signal indication requires motorists to make a complete stop.



Recommended Improvements

- Two 11-foot-wide travel lanes with 22-foot raised median with mountable curb
- Ten-foot-wide shared use paths on both sides
- Design Speed is 35mph
- Closed drainage system with stormwater ponds
- Lighting
- Landscaping

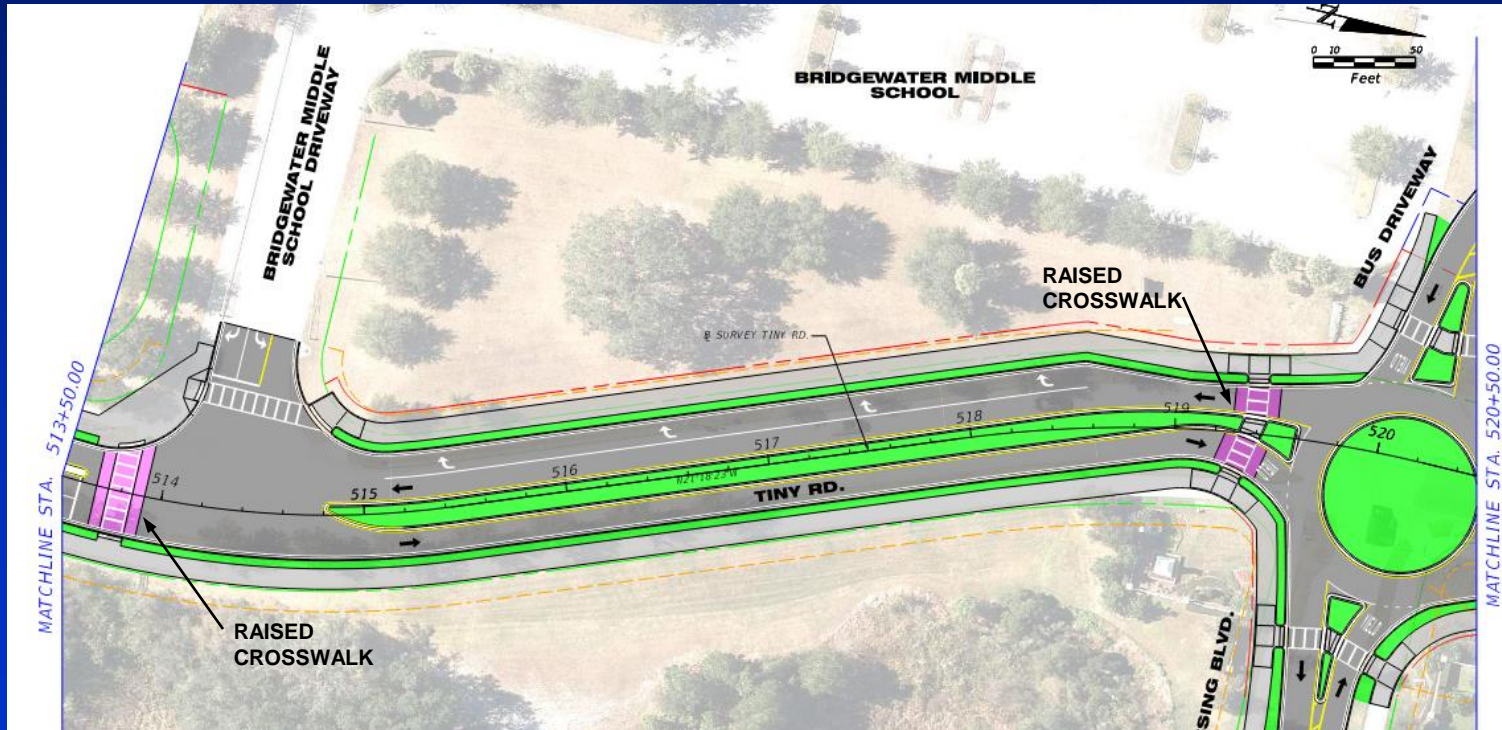
Recommended Typical Section





Recommended Improvements

Bridgewater Middle School Driveway: Right Turn Lane and Raised Crosswalk

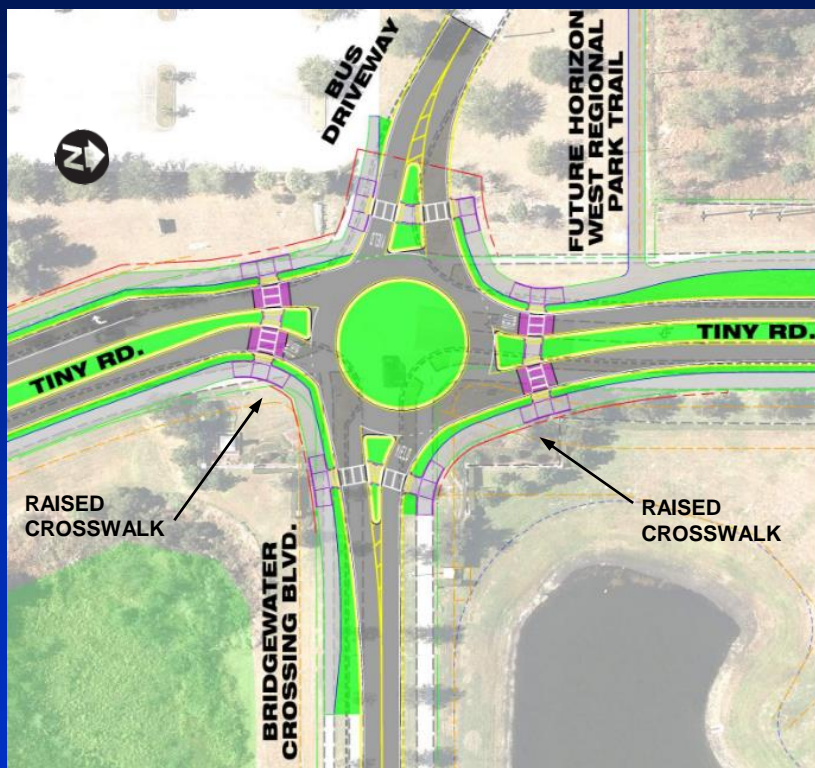


- Raised crosswalk crossing Tiny Road at the existing stop sign will bring greater visibility to pedestrians and calm traffic as it approaches the crossing.
- Proposed right turn lane was requested by the school and right of way will be donated in partnership with OCPS.



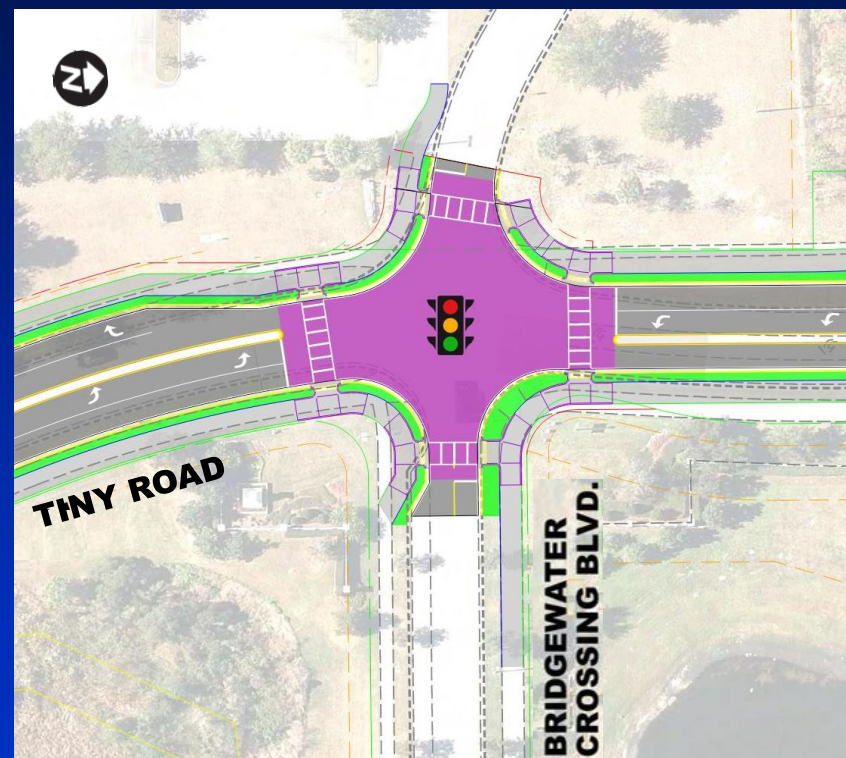
Recommended Improvements

Bridgewater Crossing Boulevard



Preferred Alternative: Roundabout

- Curvature causes drivers to slow down
- Accommodates school buses and fire trucks



Alternative 2: Raised Intersection

- Protected crossings for pedestrians
- Raised intersection creates traffic calming



Recommended Improvements

Preferred Alternative: Roundabout Hamlin Groves Trail



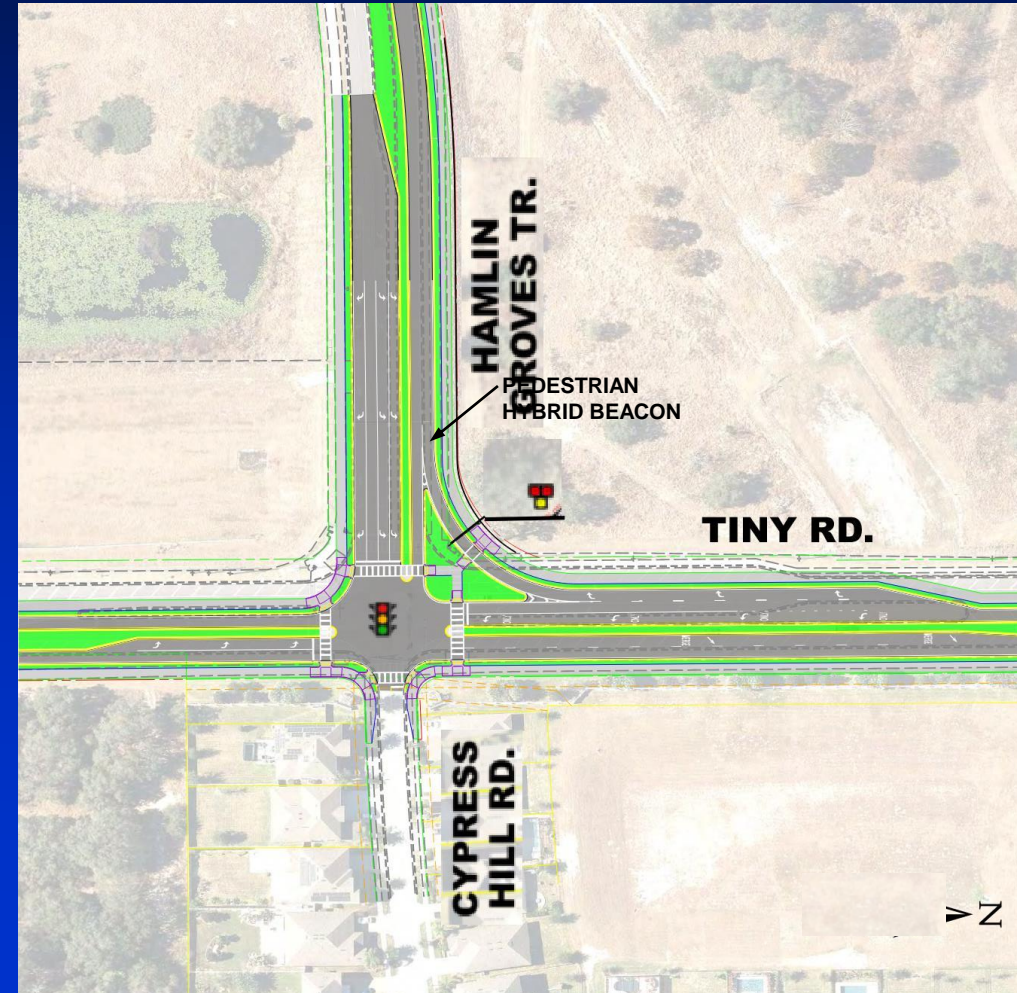
- Curvature causes drivers to slow down.
- Design of right turn lane onto Hamlin Groves Trail encourages drivers to turn right to reach shopping/dining and SR 429 rather than cutting through neighborhoods.
- Pedestrian Hybrid Beacon on right turn creates protected crossing for pedestrians.



Recommended Improvements

Alternative 2: Traffic Signal Hamlin Groves Trail

- Adds additional left turn lane onto Tiny Road heading north.
- Design of right turn lane onto Hamlin Groves Trail encourages drivers to turn right to reach shopping/dining and SR 429 rather than cutting through neighborhoods.
- Pedestrian Hybrid Beacon (PHB) on right turn creates protected crossing for pedestrians.

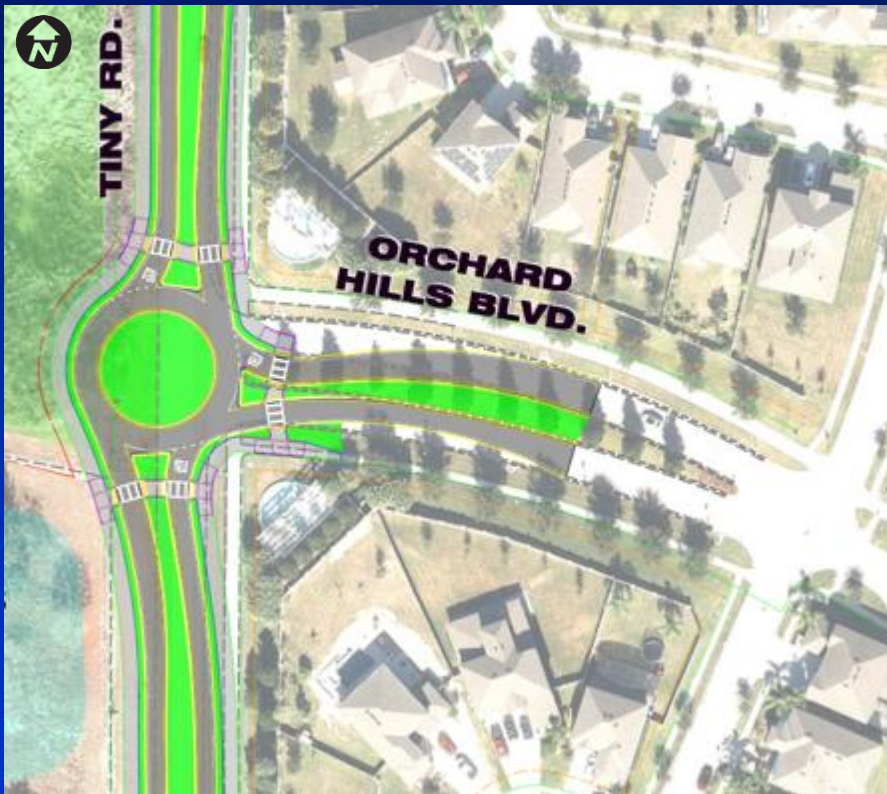




Recommended Improvements

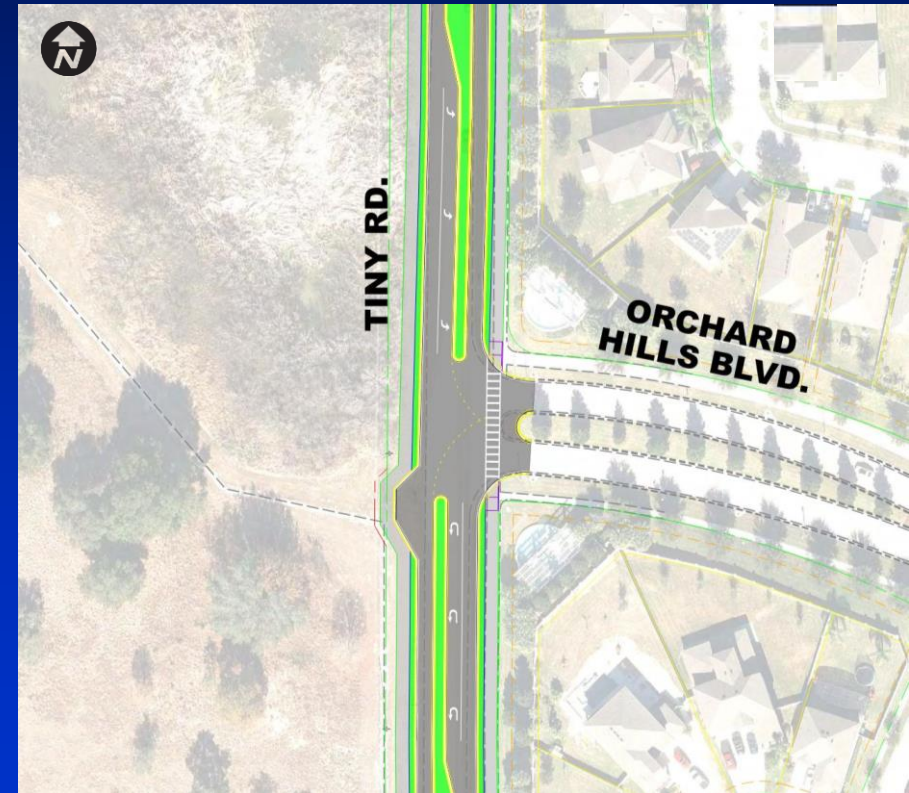
Orchard Hills Boulevard

Preferred Alternative: Roundabout



- Curvature causes drivers to slow down

Alternative 2: Median Opening

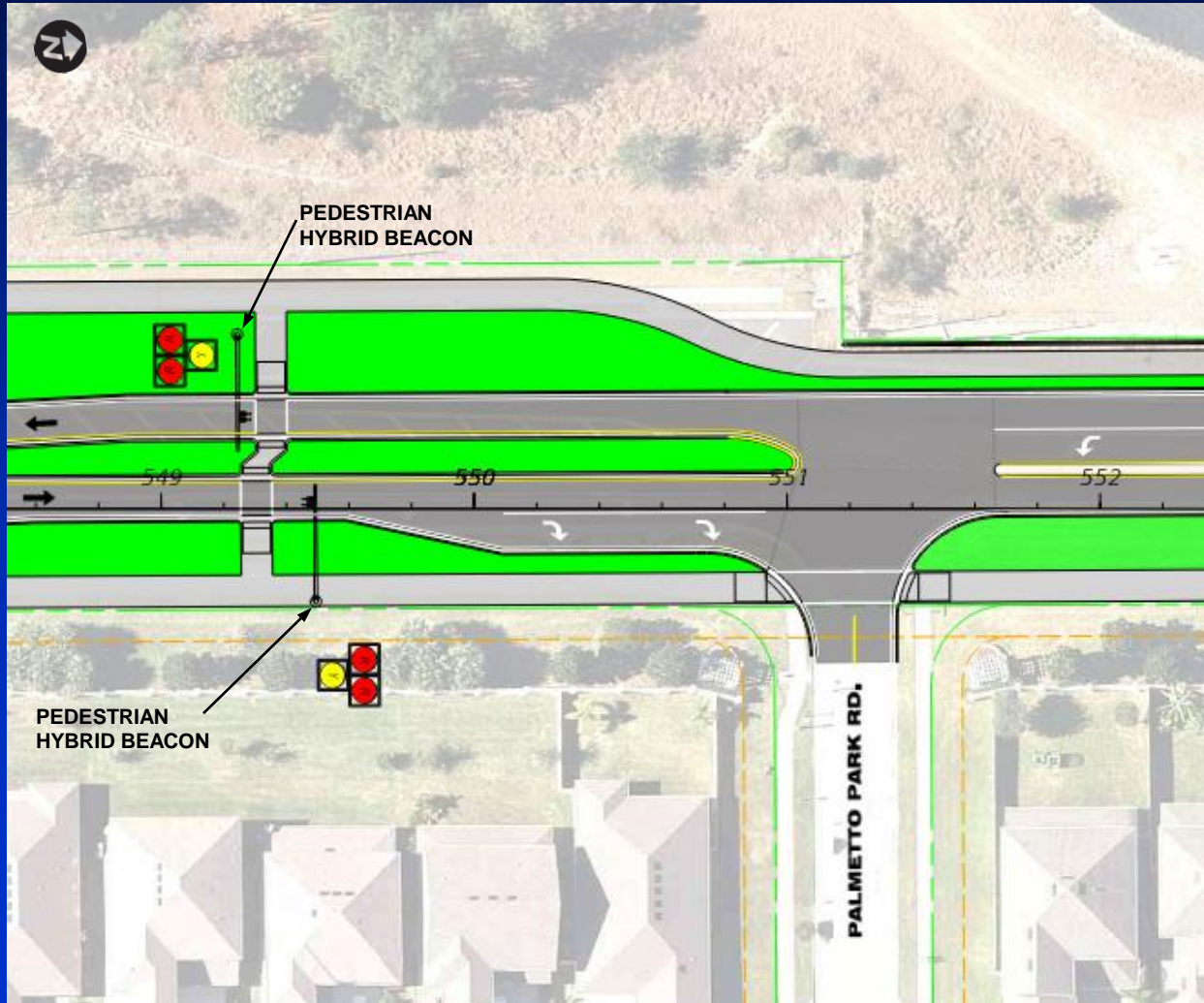


- Bulb out is added for U-turns



Recommended Improvements

Palmetto Park Road: Nearby Mid Block Crossing and PHB

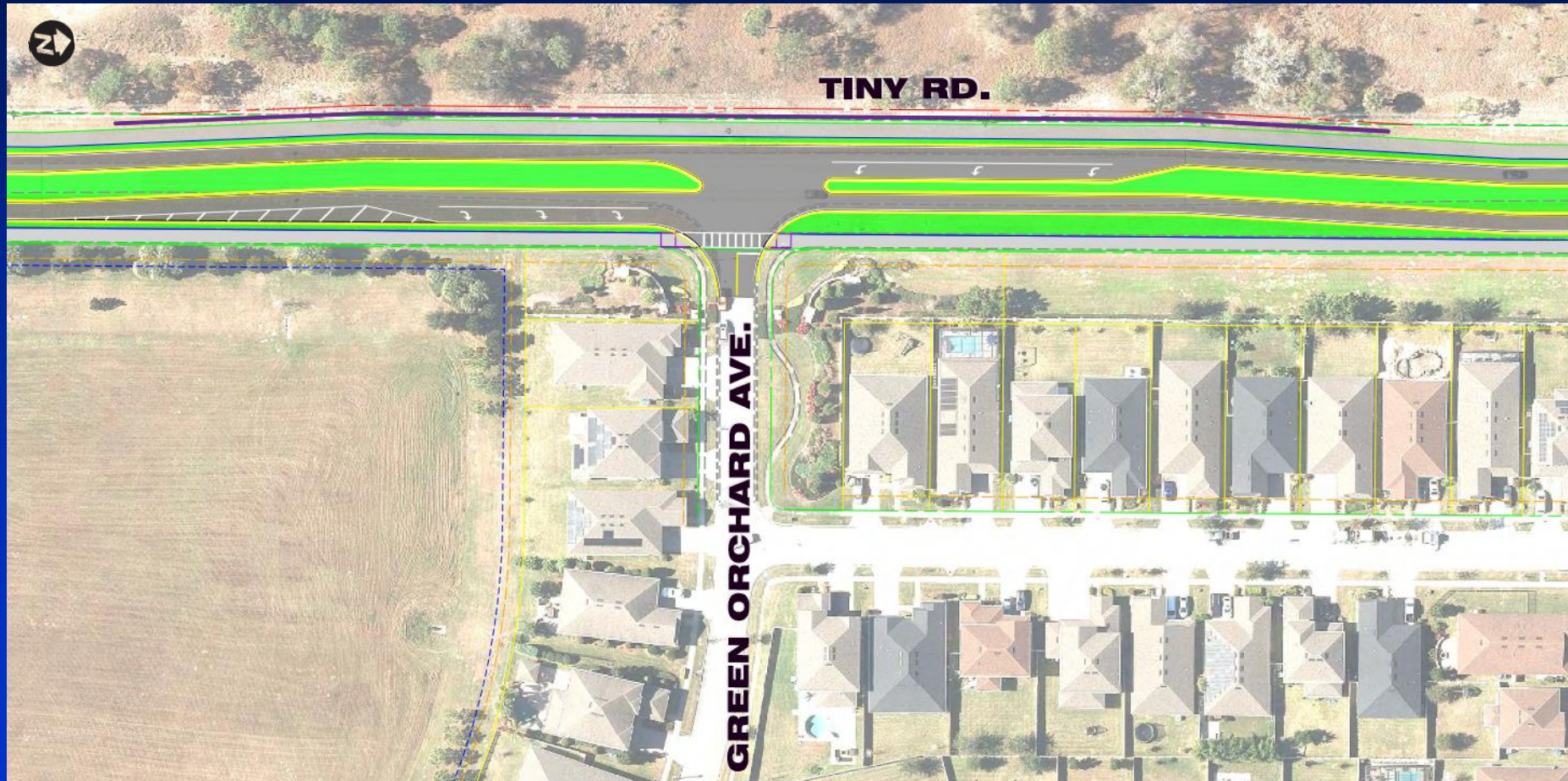


- Pedestrian Hybrid Beacon allows for a protected crossing of Tiny Road near Palmetto Park Road.
- The offset design of the angled median refuge allows for better visibility of oncoming traffic for the pedestrians.



Recommended Improvements

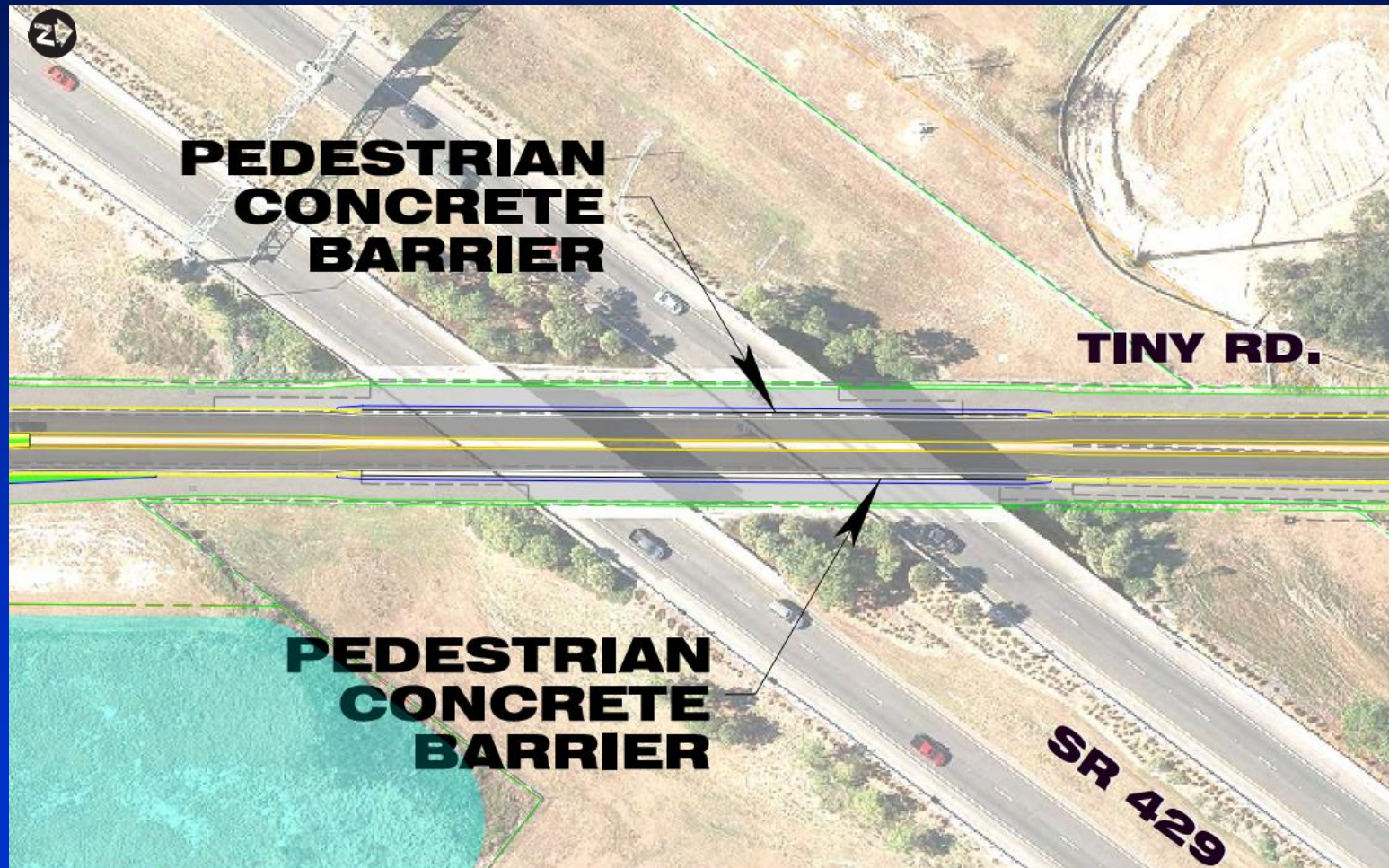
Right Turn Lane added at Green Orchard Avenue





Recommended Improvements

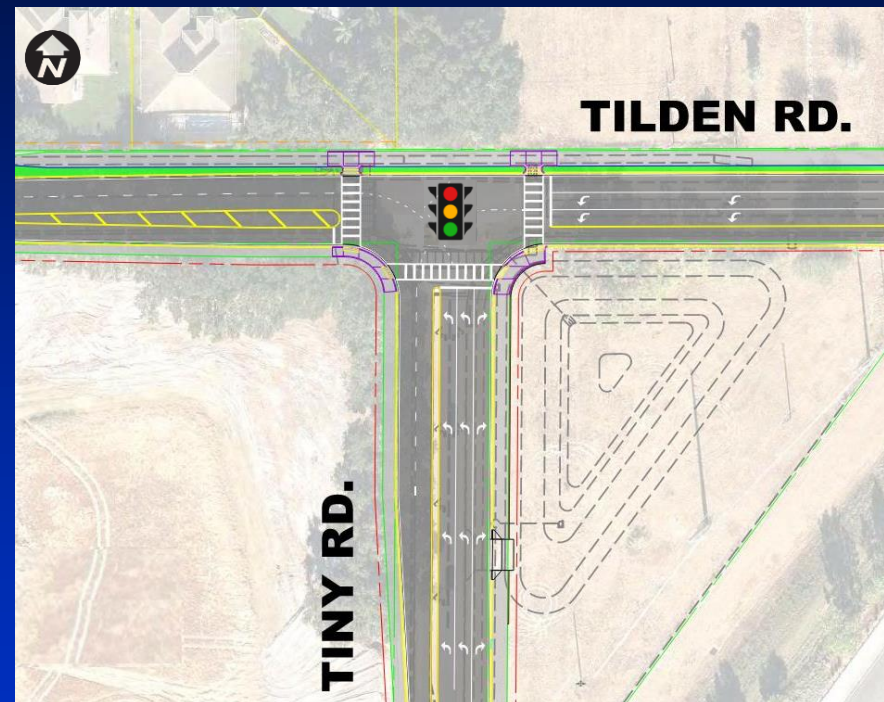
Pedestrian Concrete Barriers under SR 429 Bridge





Recommended Improvements

Tilden Road



Preferred Alternative Traffic Signal - East Shift

- Dual left turns onto Tiny Road and onto Tilden Road
- Multi-use Path (east side) continues across Tilden Road and connects with future Horizon West Trail
- Through coordination with Foundation Academy (landowner on southwest corner of Tiny Road/Tilden Road intersection), the trail was positioned to avoid the existing oak trees which are important to them.

Alternative 2: Traffic Signal – West Shift



Recommended Improvements

Southern Drainage Basin Map (SFWMD)

- **Basin 1**
Recommended
Pond:
Pond 1A
- **Basin 2**
Recommended
Pond:
Pond 2A

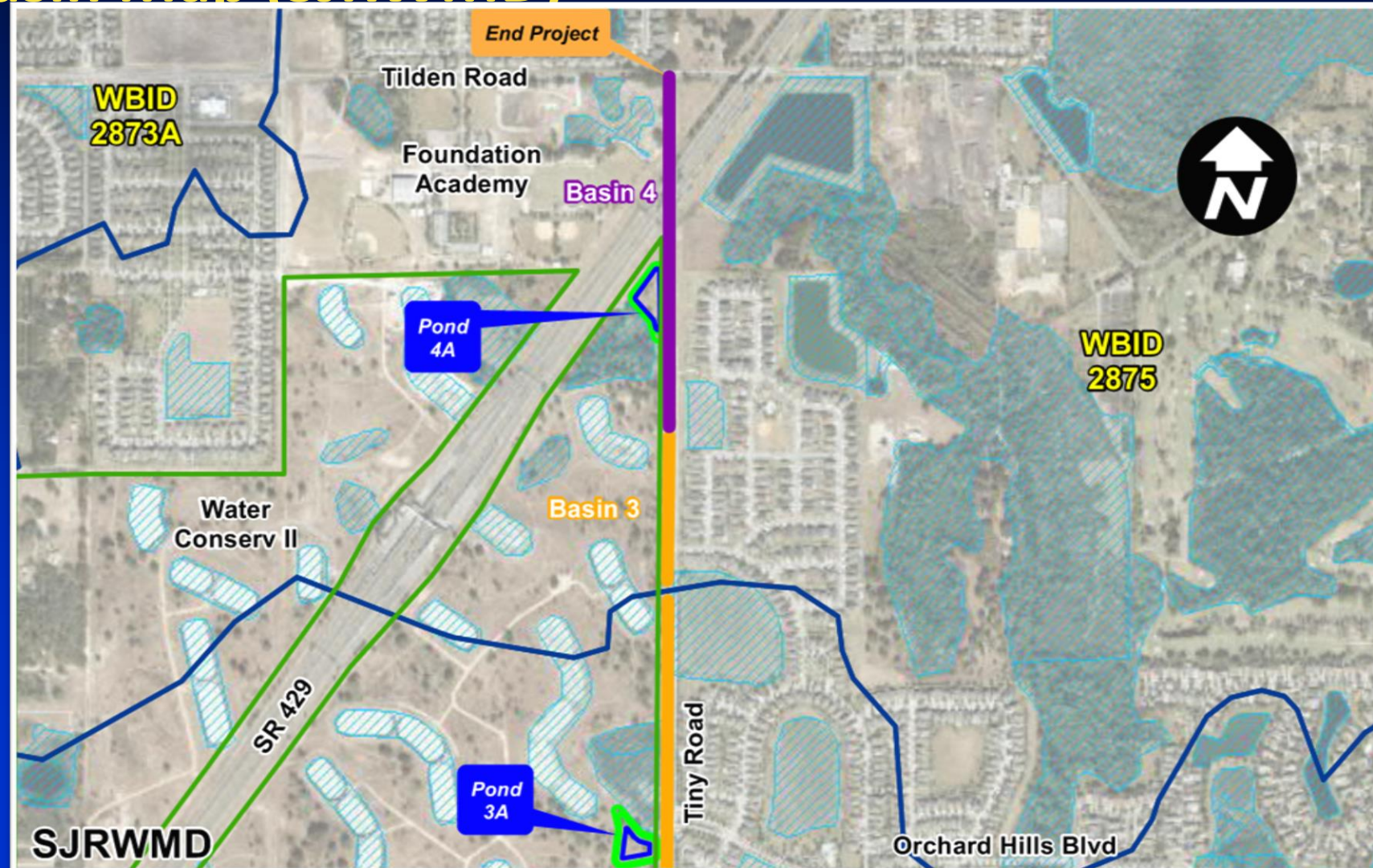




Recommended Improvements

Northern Drainage Basin Map (SJRWMD)

- **Basin 3**
Recommended
Pond:
Pond 3A
- **Basin 4**
Recommended
Pond:
Pond 4A





Recommended Improvements





Recommended Improvements

Evaluation Matrix

| Evaluation Criteria | No-Build Alternative | Alternative 1 (Preferred) | Alternative 2 |
|--|-------------------------|------------------------------|---------------------|
| Right-of-Way Impacts | | | |
| Number of Residential Acquisitions | None | None | None |
| Right-of-Way Needed (acres) | None | 7.84 | 7.29 |
| Number of Parcels Impacted | None | 11 | 8 |
| Social, Natural, & Physical Impacts | | | |
| Social & Neighborhood | None | Low | Low |
| National Register Archaeological/Historical Sites | None | Low | Low |
| Threatened/Endangered Species | None | Moderate | Moderate |
| Acres of Wetlands | None | 0.35 | 0.25 |
| Acres of Floodplains | None | None | None |
| Potential Contamination Sites | None | None | None |
| Meets County Level of Service Standard | No | Yes | Yes |
| Safety Impacts | | | |
| Pedestrian Improvements | None | High | Moderate |
| ICE Evaluation (Predicted Fatality and Injury Crashes) * | - | 0.42 | 0.37 |
| Estimated Costs (Present Day Costs) | | | |
| Design (8% of Construction) | No Cost | \$1,803,919 | \$2,133,372 |
| Right-of-Way Acquisition** | No Cost | \$280,000 | \$262,000 |
| Roadway Construction | No Cost | \$22,548,985 | \$26,667,156 |
| CEI (8% of Construction) | No Cost | \$1,803,919 | \$2,133,372 |
| Total Cost ** | | \$26,483,823 | \$31,195,900 |



Recommended Improvements

Interim Safety Improvements:

- Two new signs: Hill Blocks View have been added north of Green Orchard Ave
- Raised Reflective Pavement Markers will be added along the edge lines and centerline of Tiny Road at 10' spacing for 200' north of Green Orchard Ave.





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Public Engagement and Schedule

- Community Meeting

- Newsletters

- Project Website

<https://www.tinyroadstudy.com>

- Call/Email

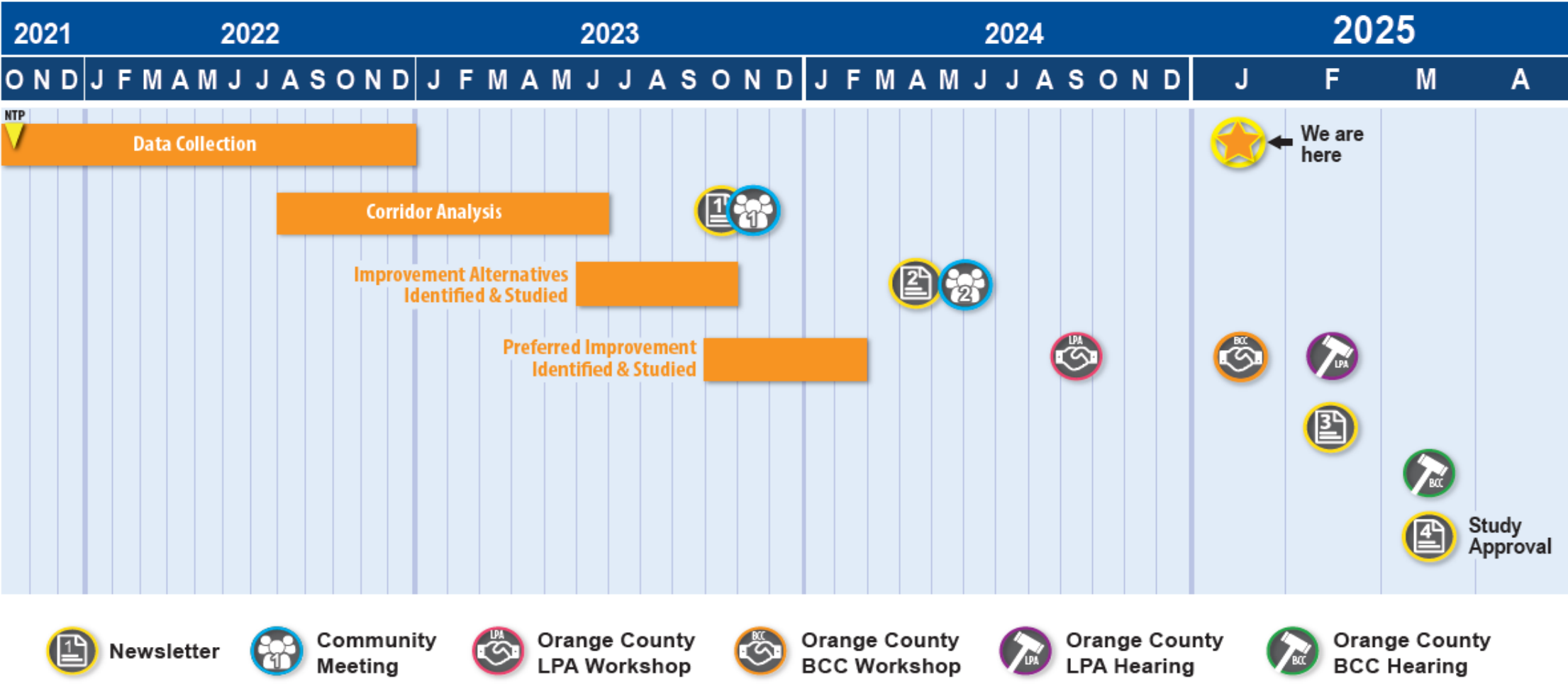
- Attend LPA & BCC Hearings





Public Engagement and Schedule

Project Schedule





Public Engagement and Schedule

Estimated Design and Construction Schedule

| TINY ROAD IMPROVEMENT SCHEDULE | | | | | | | | |
|--------------------------------|------|------|------|------|------|------|------|------|
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| RCA | | | | | | | | |
| DESIGN | | | | | | | | |

- Design is funded for 2025.
- ROW and Construction are currently not funded.



Presentation Outline

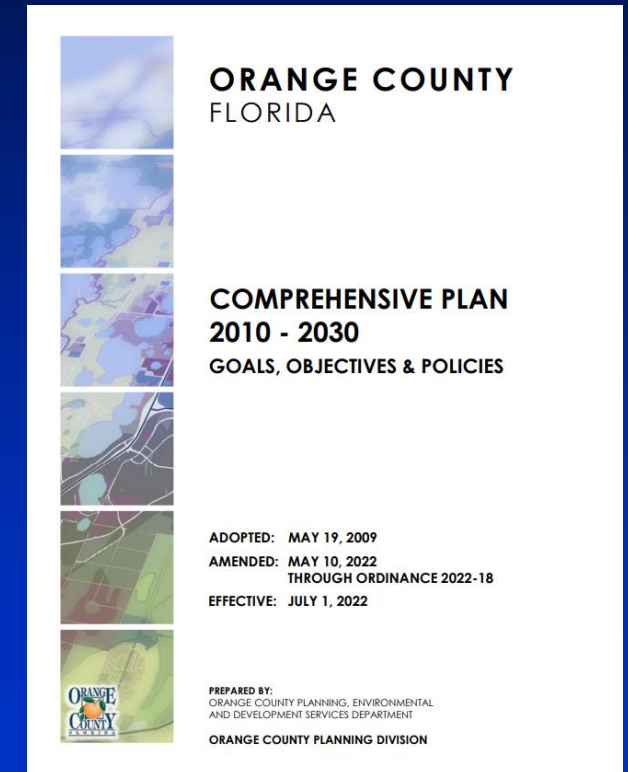
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Summary

Consistency with the Comprehensive Plan

- Implement Long Range Transportation Plan (Obj. T1.1)
- Implement financially-feasible multimodal transportation system (Obj. T1.3)
- Ensure LOS standards are met on County roads within unincorporated Orange County (Obj. T1.3.1)
- Support strategies which promote convenient & efficient mobility system for all modes (Obj. T3.1)
- Build street, pedestrian and bicycle networks that provide interconnectivity and access to multimodal transportation facilities (Obj. T3.2)





Summary

Summary:

- The RCA considered existing data and engineering criteria to anticipate future conditions and recommend a preferred alternative which addresses safety improvements and pedestrian access.
- Tiny Road will be designed as a 2-lane urban roadway utilizing Complete Streets and Vision Zero principles. The raised median will separate northbound and southbound traffic.
- Three roundabouts are proposed to calm speeds and create safer intersections.



Summary

Summary:

- The preferred alternative includes enhanced pedestrian and bicycle facilities by adding a multi-use path on the west side of the corridor and additional protected crossings of Tiny Road.
- The preferred alternative addresses the sight distance deficiencies along the corridor caused by the substandard vertical curves (hills that block the view.)

Transportation Planning Division

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Workshop

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