



Transportation Master Plan

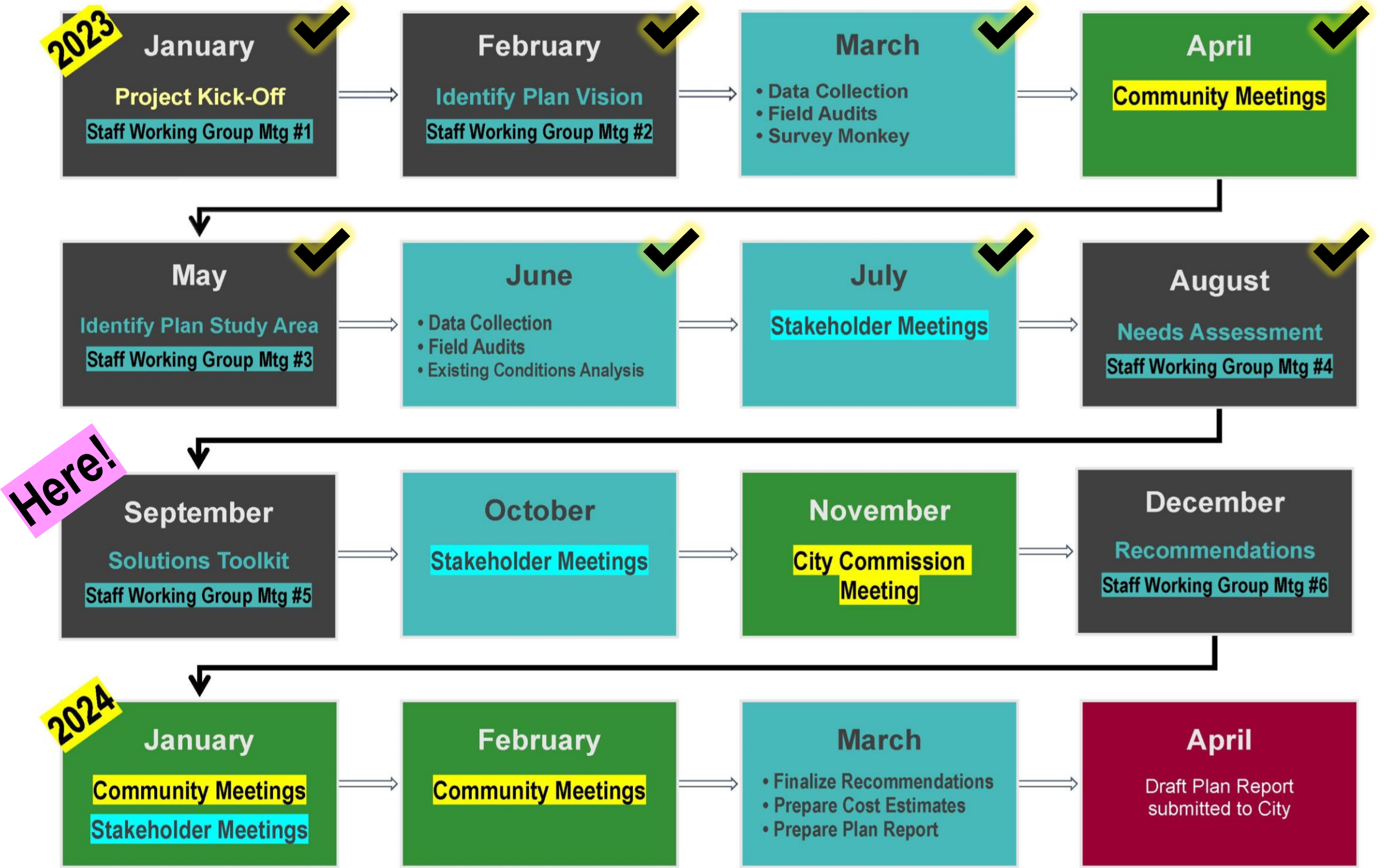
Agenda

1. **Current Status** (5 minutes)
2. **Next Steps** (5 minutes)
3. **Westside Pedestrian / Bicycle Route Update** (10 minutes)
4. **Solutions Toolkit Discussion** (70 minutes)

Meeting Goal:

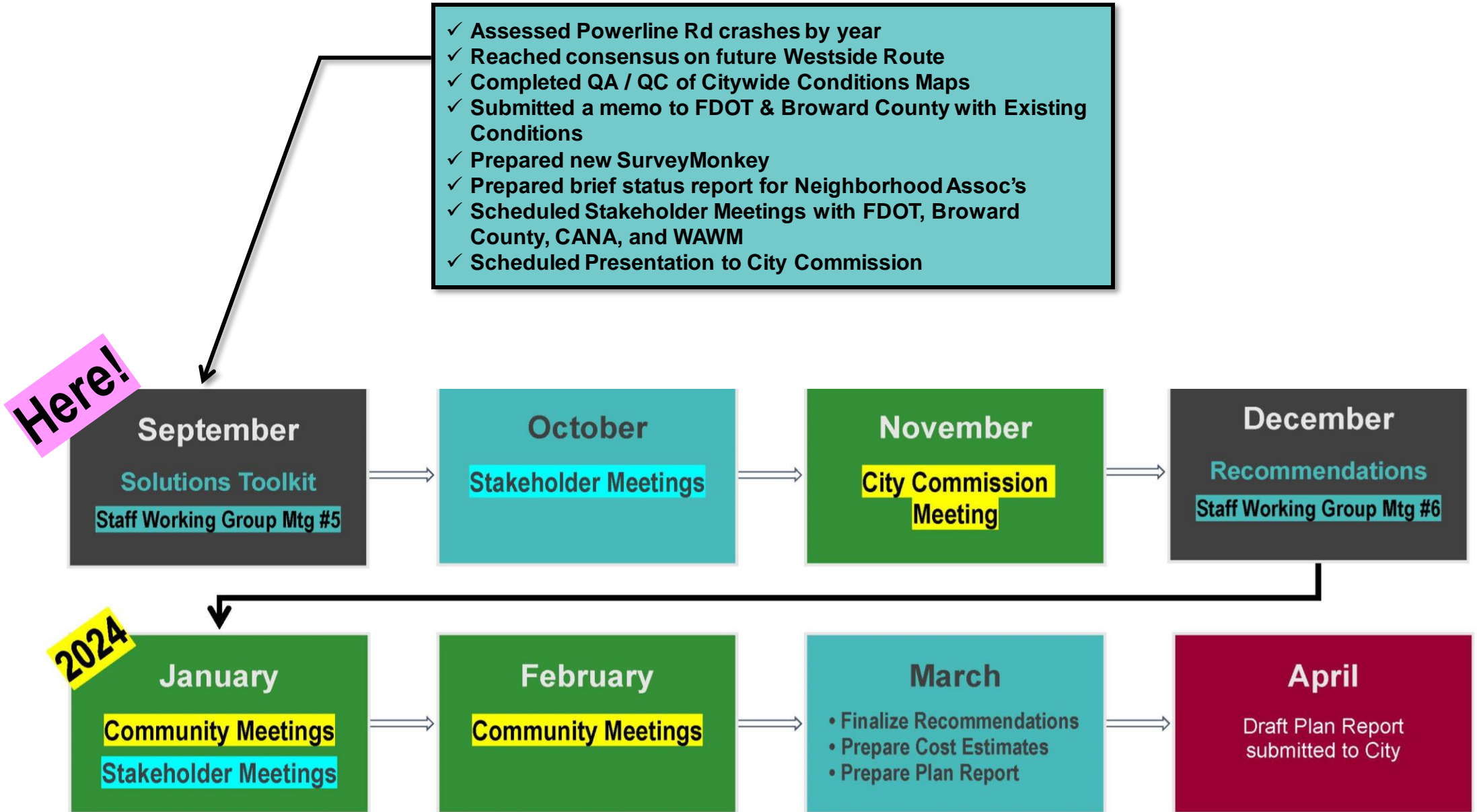
- ✓ Identify any objectionable or “no go” solutions
- ✓ Confirm recommendations are focusing on community concerns (are we solving most pressing issues?)
- ✓ Identify any “must have” solutions
- ✓ Discuss Next Steps and how the potential treatments will evolve into Recommendations





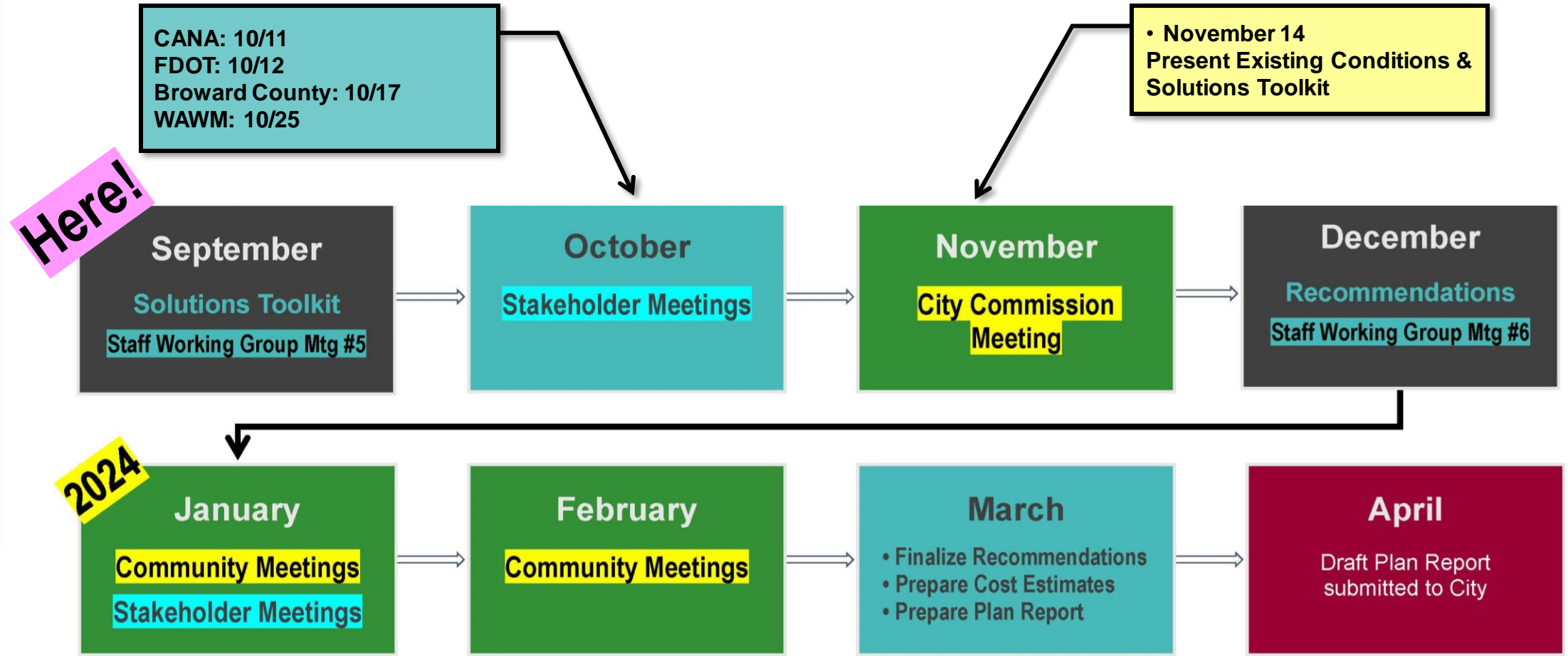
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Current Status

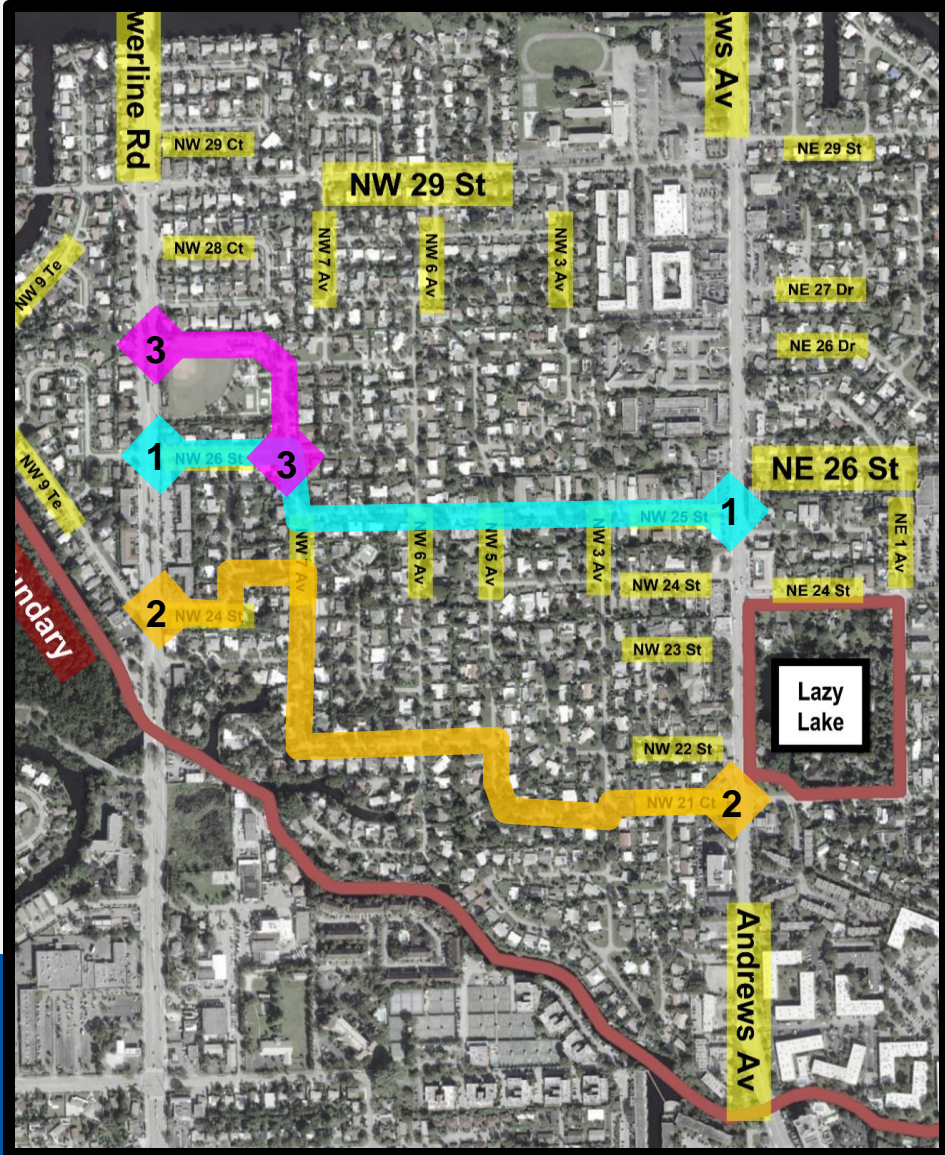


Next Steps

City Action items
1. Provide feedback on Summary of Potential Treatments (2 weeks)

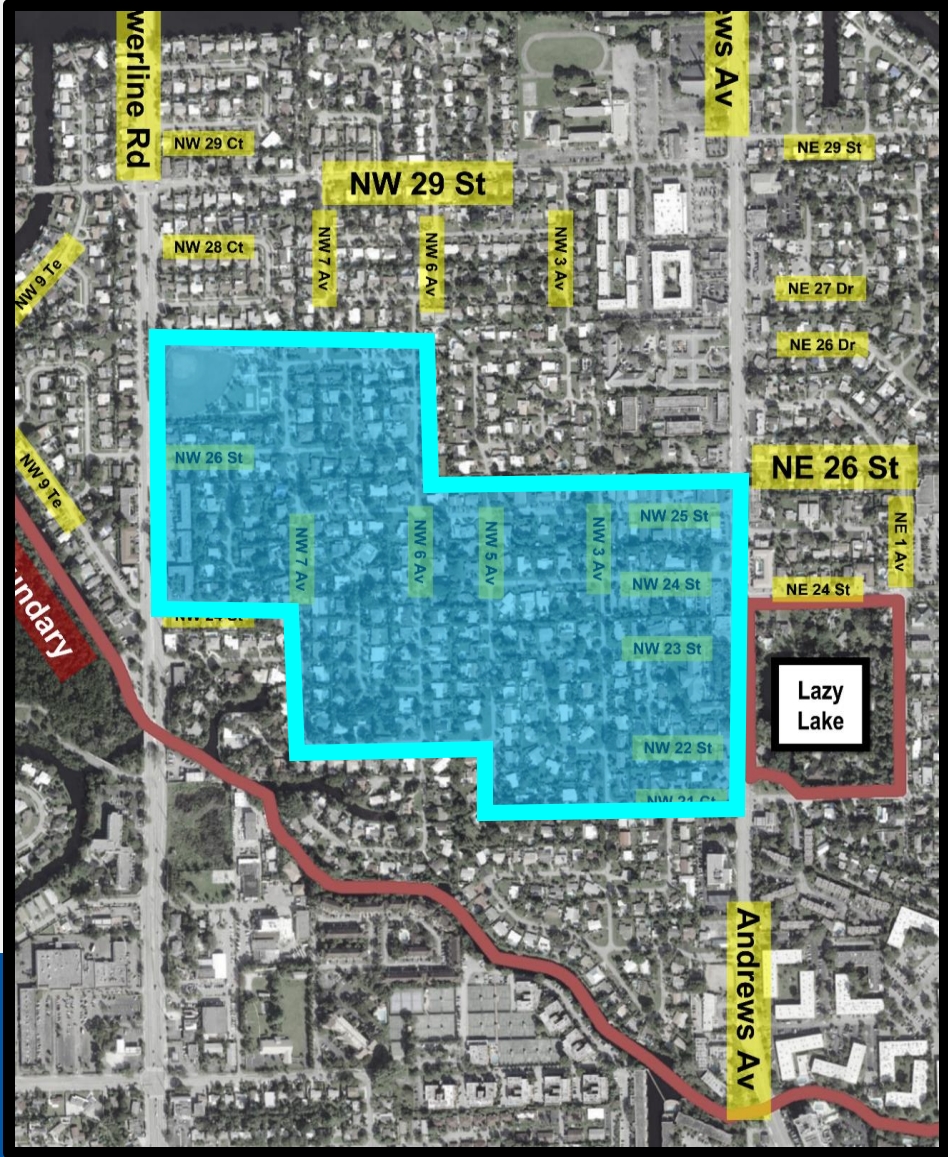


Westside Ped/Bike Route - Update

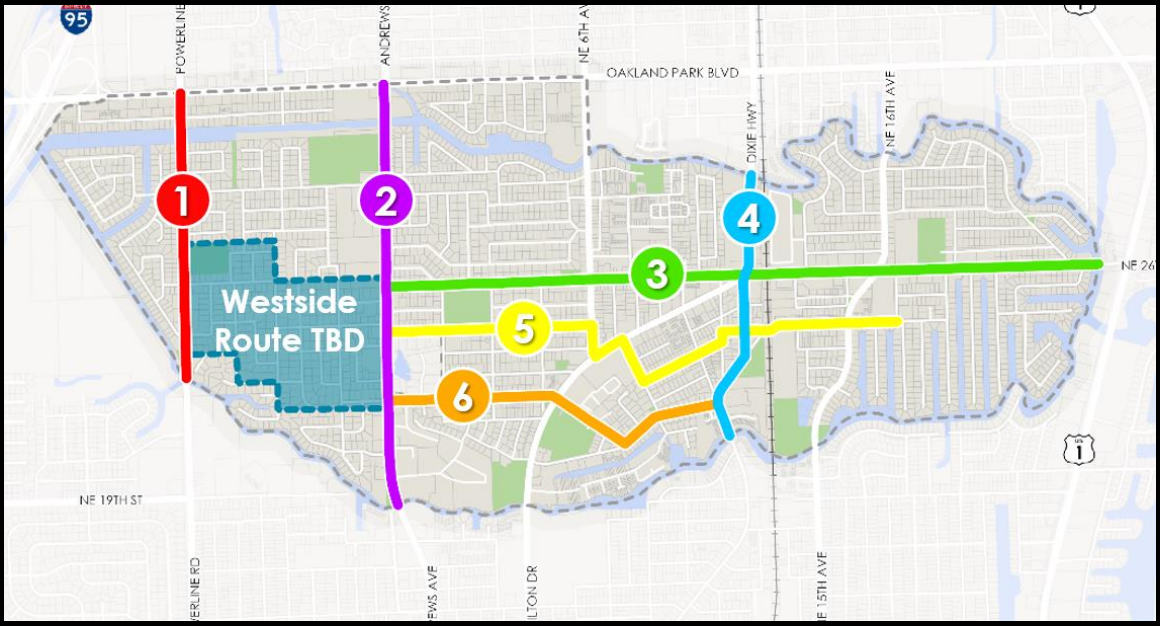


- August SWG meeting presented two options:
 - **Option 1:** NW 26 St to NW 25 St
 - **Option 2:** NW 24 St to NW 21 Ct
- Another possible route is Mickel Park Pedestrian entrance to NW 7 Av, to either NW 25 St or NW 21 Ct (**Option 3**)
- Westside residents may prefer a combination or different route
- All routes have pro's & con's
- For all potential routes, the existing conditions and needs throughout the neighborhood are consistent:
 - ✓ No sidewalks
 - ✓ Minimal traffic calming
 - ✓ Minimal streetlights
 - ✓ No bicycle facilities
 - ✓ No wayfinding signage
 - ✓ 4-way stops
 - ✓ Need to improve crossing over Andrews Av.

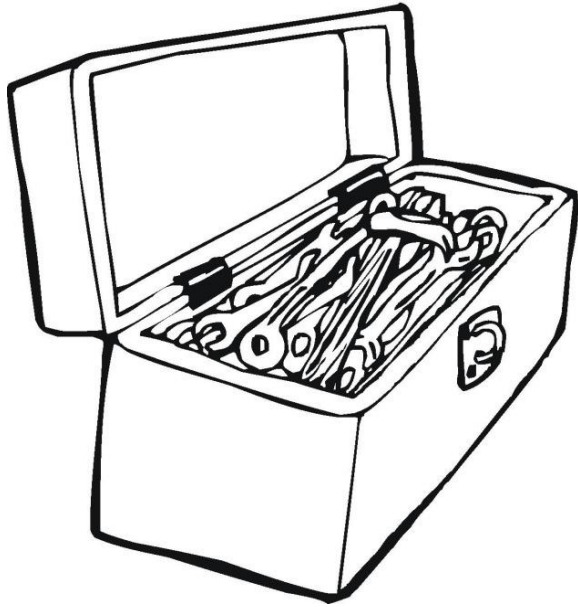
Westside Ped/Bike Route - Update



- Instead of selecting the preferred route, the TMP will instead identify the recommended improvements that would be applicable for any route in this location
- The TMP will include a per-block cost for the improvements
- The City can identify the route during the TMP process, or it can be identified after the TMP is adopted
- Therefore, the Plan Study Area will show “Westside Route TBD” as a polygon, versus a specific route.



Solutions Toolkit



Improve Crossings of Higher Volume Roads



Slow Traffic on Neighborhood Streets



Redesign Streets to Match the Context



Update & Connect the Walking, Biking, and Scooting Network

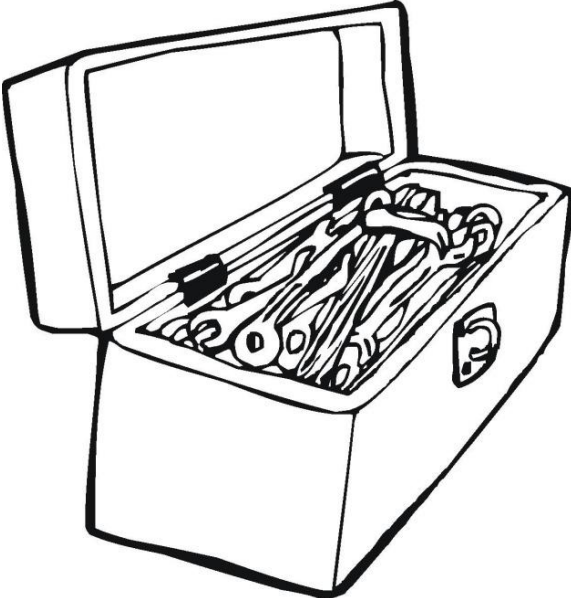


Increase Access to Destinations Like Wilton Drive and Community Parks

Achieve the WM TMP Vision:

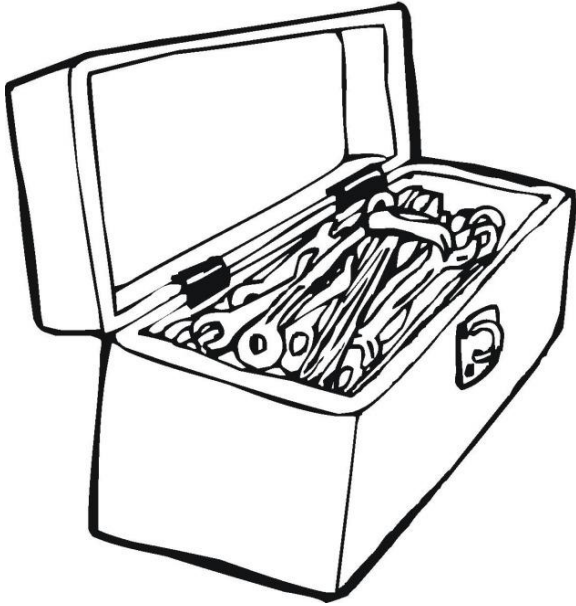
- ✓ Cohesive Community
- ✓ Community's Diverse Needs
- ✓ Daytime & Nighttime Activity
- ✓ Safe, Comfortable, and connected ped / bike routes

Solutions Toolkit



- Achieve the WM TMP Vision:
- ✓ Cohesive Community
 - ✓ Community's Diverse Needs
 - ✓ Daytime & Nighttime Activity
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Solutions Toolkit



Achieve the WM TMP Vision:

- ✓ Cohesive Community
- ✓ Community's Diverse Needs
- ✓ Daytime & Nighttime Activity
- ✓ Safe, Comfortable, and connected ped / bike routes

Signalized Intersections

- Signals should be retimed to allow for pedestrians to cross at 3.5 ft / second; where senior housing is present, they should allow crossings at 2.8 ft / second
- Leading pedestrian interval treatments will be considered
- Protected left turn phases will be considered
- Left turn calming treatments like hardened centerlines will be considered
- Pedestrian refuge islands or treatments to reduce crossing distance will be evaluated and included as space permits
- Lighting should be evaluated for both drivers and pedestrians
- Signals will be evaluated for no right turn on red treatments





**More information on warrants for PHB application can be found at <https://mutcd.fhwa.dot.gov/html/2009/part4/part4f.htm>*



Mid-Block Crossings

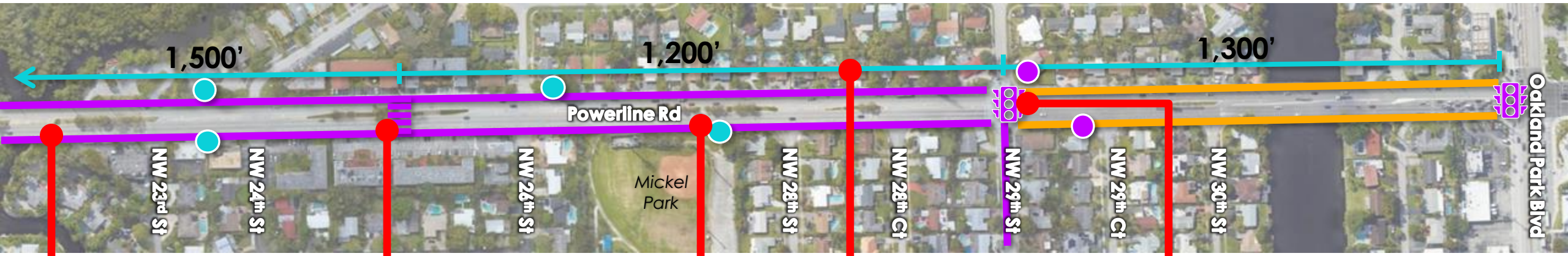
- All mid-block crossings are intended to include Rectangular Rapid Flashing Beacons (RRFBs)
- Prior to installation, all identified mid-block crossing locations should be evaluated to see if they meet MUTCD warrants for Pedestrian Hybrid Beacons (PHBs) or signals.*
- On 2-Lane roads, mid-block crossings should also be raised
- On roads with 3 or more lanes, pedestrian refuge islands should be included where space permits
- Lighting should be evaluated for both drivers and pedestrians

Summary: Existing Conditions & Key Findings

1 Powerline Rd

-  Buffered Bike Lane
-  Bike Lane
-  Mid-Block Crossing (RRFB)
-  Signal

- Bus Stops
-  Within 250' of Signalized Crossing
-  Not within 250' of Signalized Crossing



Existing buffered bike lanes are too wide (12') & drivers drive / park in them

Fatal crash: driver killed two children on sidewalk passing a bus

No crossing at pedestrian only entrance to Mickel Park

Long distances between ped. crossings & bus stops far from crossings; encourages people to cross outside of crosswalks

Signal timing is too short to allow a person walking at an average speed (3.5 ft / sec) to fully cross Powerline Road and left turns are not protected

Other General Issues

Drivers observed speeding
Limited lighting at night

Buses stop in bike lane
Bus stops missing amenities

Driveways & back out parking onto Powerline Rd creates conflict points (generally on the west side)

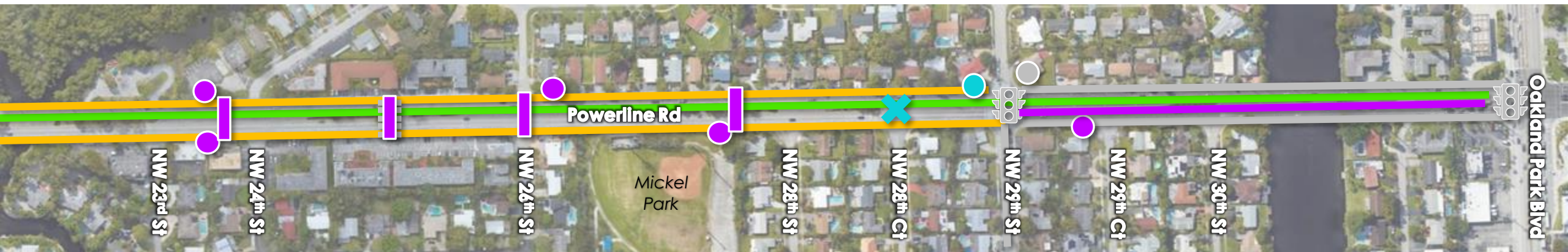
Bike facilities are not comfortable for all ages and abilities

Summary: Potential Corridor Treatments

1 Powerline Rd

Existing/Committed Facilities

-  Bike Lane
-  Mid-Block Crossing
-  Signal
-  Bus Stop



Redesign Road to **Lower Speed to 30 MPH**

- Realigns road to context
- Addresses speed & crashes

New Raised Crossing with RRFB (Evaluate for PHB / Signal)*

- Access to bus stops, Mickel Park, & across Powerline Rd
- Encourages crossing at designated locations

Can only be implemented with speed reduction; near term: at grade crossing

*FDM allows raised crosswalks at 30 MPH or lower design speed. Roadway redesign would support existing and future residential land use context.

Convert to **Raised Bike Lane or Shared Use Path**

- Deters parking in bike lane
- Slows traffic
- Improves comfort

Near term: protected bike lanes on east side, bollards at intersections on west side.

Evaluate Lane Repurposing

- Allows for protected bike lanes and bus islands

Close Median Access

- Limits turning conflicts
- NW 28th Ct becomes right in / right out

Evaluate Relocating Stop

- Far side stops preferred for bus operations

Convert to Bus Bulb

- Improves stop comfort
- Bikeway goes behind stop
- Reduces bus / bike conflict

Corridor Wide Strategies

Paint Conflict Markings at Intersections & Driveways

- Limits turning conflicts
- Alerts drivers and bicyclists to potential for conflict

Evaluate Lighting at Crossings

- Address nighttime crashes

Narrow Side Street Curb Radii

- Slows drivers
- Limits turning conflicts

Construct Turning Wedges at Unsignalized Left Turns

- Slows drivers
- Limits turning conflicts

1 Powerline Rd at NW 29th St



Addressing Traffic Speed

- Evaluate lane repurposing
- Consider removing SB right turn lane
- Implement protected left turn signal phase
- Add hardened centerlines on Powerline Rd

Biking Improvements

- Construct protected intersection or install bend outs and bike boxes
- Add green conflict paint in bike lanes at intersections and driveways

Supporting Transit Riders

- Construct bus bulbs
(shared bus stop option or conflict striping at bus stop options for constrained areas)
- Consider relocating stops

Walking Improvements

- Restripe crosswalks
- Lengthen signal for pedestrian crossing
- Add leading pedestrian intervals
- Upgrade to directional curb ramps
- Construct median refuge islands (as space permits)

Bus Bulb with Bike Lane



Shared Bus Stop



Protected Intersection



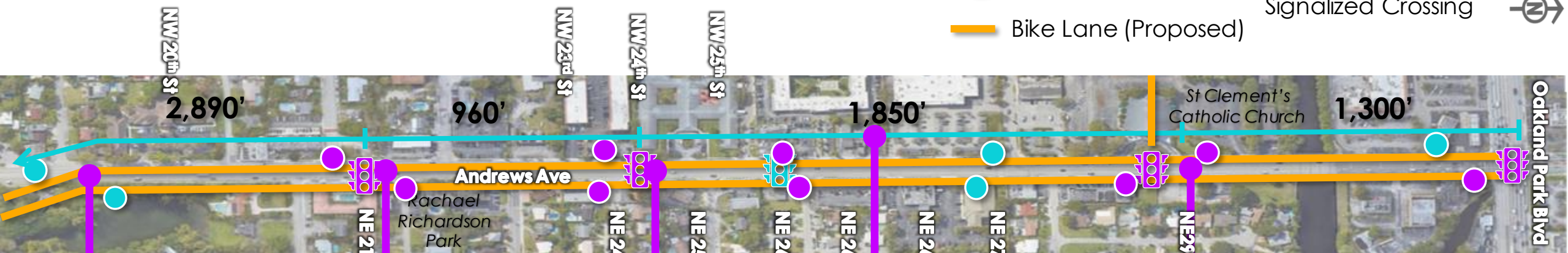
Bend Out



Summary: Existing Conditions & Key Findings

2 Andrews Ave

- Signals
 - With Crosswalk
 - Without Crosswalk
- Bus Stops
 - Within 250' of Signalized Crossing
 - Not within 250' of Signalized Crossing
- Bike Lane (Proposed)



Undefined roadway space

Left turns are not protected

Signal timing is too short to allow a person walking at an average speed (3.5 ft / sec) to fully cross Andrews Ave

Long distances between ped. crossings & bus stops far from crossings; encourages people to cross outside of crosswalks

Fatal crash involving people walking across the street

Other General Issues

Drivers observed speeding

Bus stops missing amenities

Minimum-width sidewalks

Offset intersections limit east / west crossings

Proposed bike lanes are LTS 3

No access control / median and frequent driveways

Frequent sidewalk obstructions

Limited lighting at night

Summary: Potential Corridor Treatments

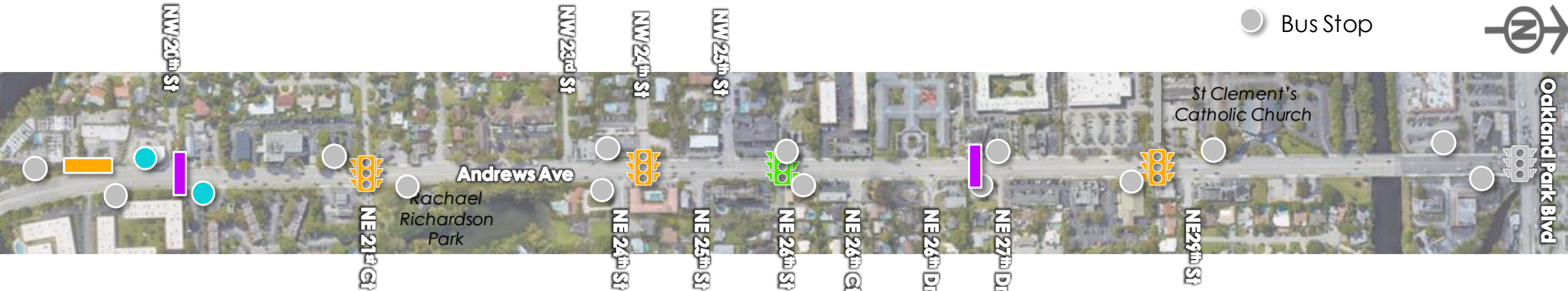
2 Andrews Ave

Existing /Committed Facilities

 Bike Lane

 Signal

 Bus Stop



New Mid-Block Crossing with PHB

- RRFB if does not meet warrant
- Improves access to bus stops and across Andrews Ave
- Encourages crossing at designated locations

Define Roadway Space

- May help slow traffic
- Placemaking opportunity

Evaluate Relocating Stop

- Far side stops preferred for bus operations

Increase Pedestrian Phase

- Allow enough time for average and slower users to cross Andrews Ave

Add Pedestrian Phase

- Including ped signals and crosswalks

Corridor Wide Strategies

Add Spot Medians

- Limits turning conflicts
- Permits left turns at designated locations

Narrow Lanes to 10' – 11'

- Provides additional space for bike or walking infrastructure

Underground Utilities

- Limits sidewalk obstructions

Evaluate Lighting at Crossings

- Address nighttime crashes

Construct Pedestrian Refuge Islands (Mid-Block Crossings)

- Shortens crossing distance

Options to Explore for Walk & Bike Infrastructure

- Widen sidewalks to create multi-use paths (may not require reconstruction)
- Build protected bike lanes (requires reconstruction)
- Paint conflict markings at intersections and driveways

2 Andrews Ave at NW / NE 24th St



Walking Improvements

- Restripe crosswalks
- Lengthen signal for pedestrian crossing
- Place crosswalks on both north and south leg of the intersection
- Add leading pedestrian intervals
- Restripe crosswalks
- Upgrade to directional curb ramps
- As space permits; construct median refuge islands

Addressing Left Turns

- Signalize Southbound Left to NE 24th Street by bringing the extra leg into the signal
- Permit left turns from NE 24th Street to Andrews Ave





Biking Improvements

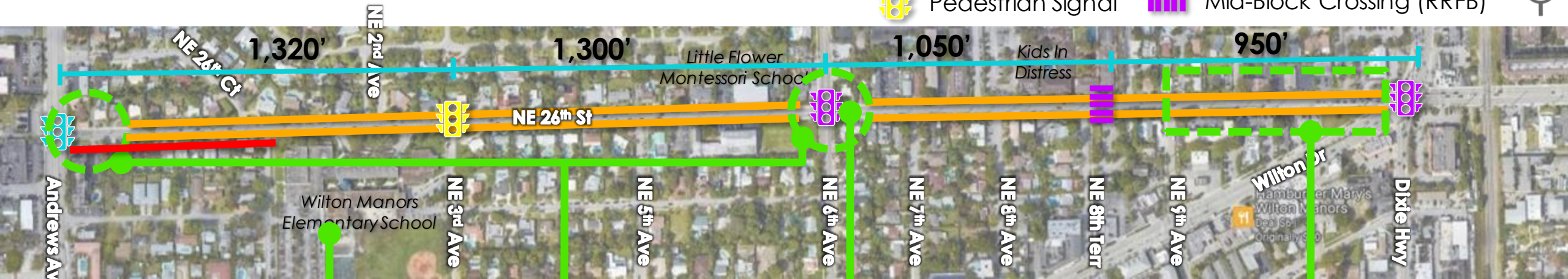
- Install bend outs and/or bike boxes to support left turns
- Add green conflict paint in bike lanes at intersections and driveways
- Options to facilitate east / west bike movement through the intersection:
 - Paint bike lanes in intersection
 - Two-way cycle track on one side of road leading to preferred crossing point (sidewalk level)
 - Shared use path

Summary: Existing Conditions & Key Findings

3 NE 26th St (West of 5 Points)

Signals

-  With Crosswalk
-  Without Crosswalk
-  Pedestrian Signal
-  Bike Lane
-  No Sidewalk
-  Mid-Block Crossing (RRFB)



Access needs for school pick up / drop off:

- Left turns onto NE 26th Street
- Circulation / traffic /one-way
- Walking / biking access

Bike lanes drop before intersections

Signal timing is too short to allow a person walking at a slower speed (2.8 ft / sec) to fully cross and left turns are not protected

Long distances between ped. Crossings; encourages people to cross outside of crosswalks

Crossing demand between Wilton Drive & Publix / Dunkin

Other General Issues

Drivers observed speeding / desired traffic calming

Desire for better north/south crossings

Frequent driveways create conflict points

Limited lighting at night

Bike facilities are not comfortable for all ages and abilities

Summary: Potential Corridor Treatments

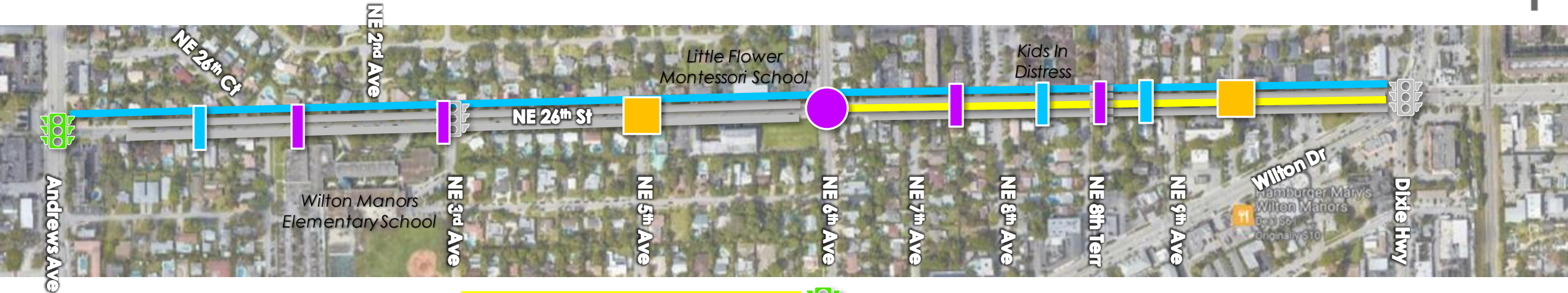
3 NE 26th St (West of 5 Points)

Existing/Committed Facilities

 Bike Lane

 Mid-Block Crossing

 Signal



Construct Raised Intersection

- Slows traffic & supports pedestrian crossing

Evaluate for Mini Roundabout

- Slows traffic
- Improves safety
- Alternative: curb extensions

Widen Sidewalk

- Evaluate north side of street to widen sidewalk to 8' where feasible

Construct Speed Hump/Table*

- Slows traffic
- Can be placed at offset intersections to facilitate bike movements

New Raised Crossing with RRFB

- Slows traffic & supports pedestrian crossing

Evaluate Lighting from NE 6th Ave to 5 Points & at Crossings

- Address nighttime crashes & visibility

Add Pedestrian Phase

- Including ped signals and crosswalks

Corridor Wide Strategies

Paint Conflict Markings at Intersections and Driveways

- Limits turning conflicts
- Alerts people biking and driving to potential for conflict

Narrow Side Street Curb Radii

- Slows drivers
- Limits turning conflicts

Add Wayfinding Signage

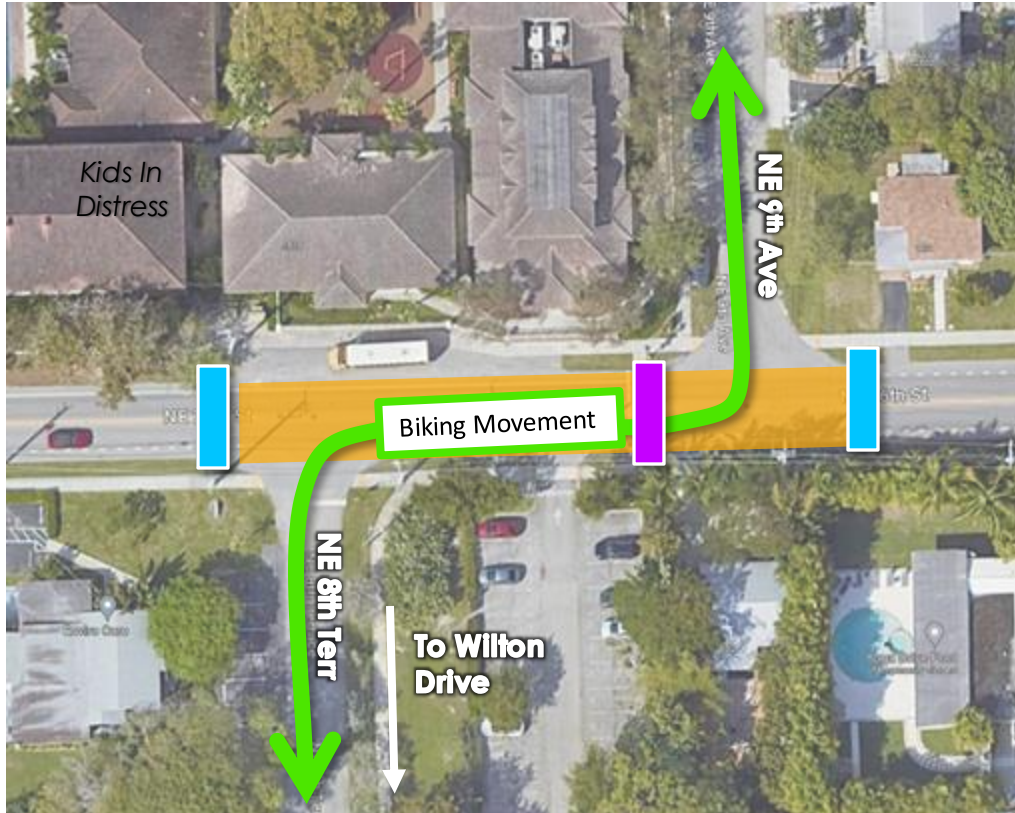
- Identify best routes to nearby destinations

Underground Utilities

- Limits sidewalk obstructions
- Allows for sidewalk completion from Andrews Ave to Wilton Manors Elementary
- Allow for widening of sidewalk on south side of NE 26th St

*ITE Guidelines for the Design and Application of Speed Humps recommends spacing of 260' to 500' to keep 85th percentile operating speed between 25 and 30 mph

3 NE 26th St between 8th Terr & 9th Ave

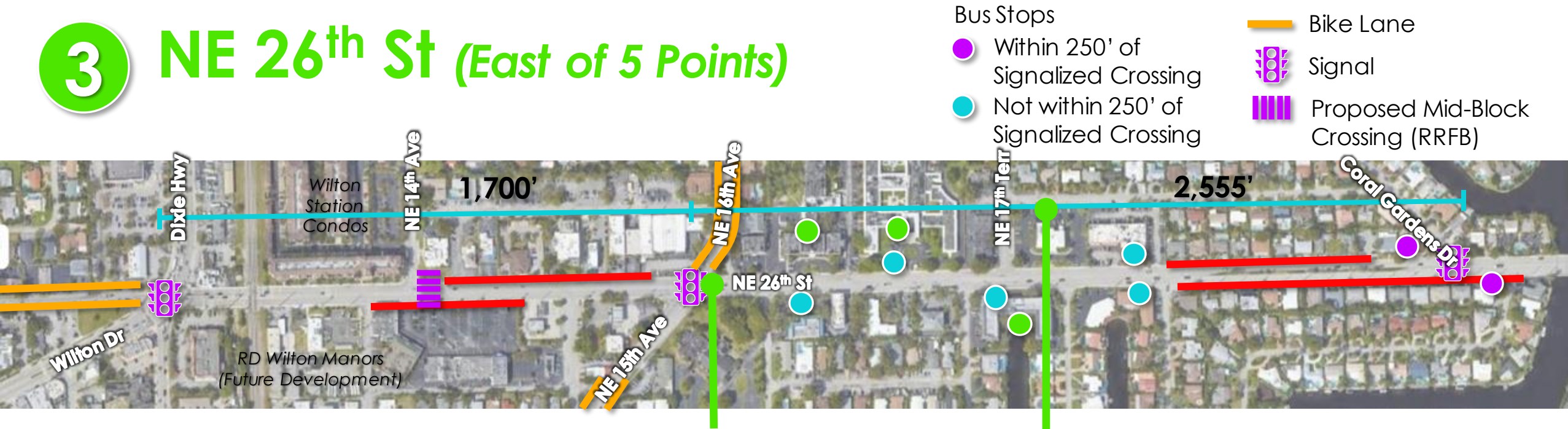


Example Use of Speed Humps to Provide Comfortable North-South Movements Across 26th Avenue at Offset Intersections

-  Speed Hump / Table
-  Raised Crosswalk with RRFB
-  Slow Zone

Summary: Existing Conditions & Key Findings

3 NE 26th St (East of 5 Points)



— Driveways & back out parking onto Ne 26th St creates conflict points

● Senior housing suggests need to meet the needs of slower pedestrians

Other General Issues

Signal timing is too short to allow a person walking at a slower speed (2.8 ft / sec) to cross NE 15th Ave

Drivers observed speeding

Long distances between ped. crossings & bus stops far from crossings; encourages people to cross outside of crosswalks

Bus stops missing amenities

No access control / median (w of NE 19th Ave)

Several severe injury crashes involving people walking and biking occurred in this segment

Minimum-Width Sidewalks

Frequent Sidewalk Obstructions

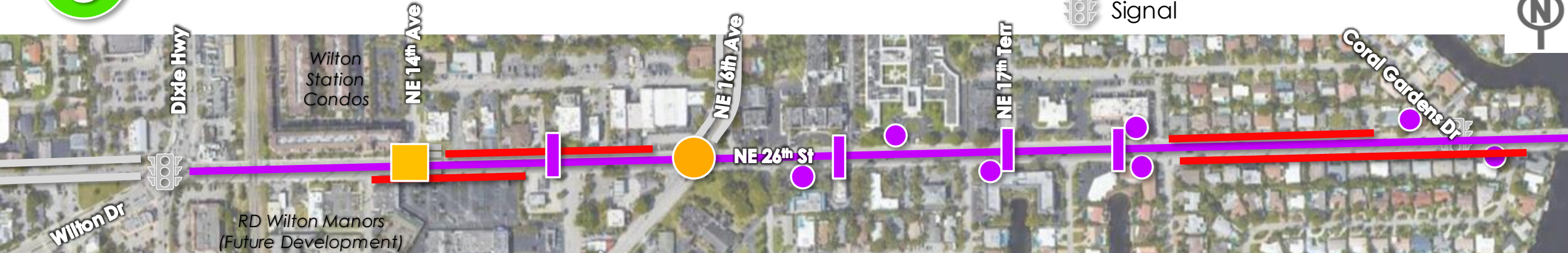
Intersection design encourages high speed movements (free rights, wide curb radii)

Summary: Potential Corridor Treatments

3 NE 26th St (E of 5 Points)

Existing/Committed Facilities

-  Bike Lane
-  Mid-Block Crossing
-  Signal



New Raised Crossing with RRFB (Evaluate for PHB / Signal)*

- Encourages crossing at designated locations

Can only be implemented with speed reduction; near term: at grade crossing

Evaluate for Peanut Roundabout

- Slows traffic
 - Improves safety
- Alternative: see intersection slide*

Convert to Bus Bulb

- Improves stop comfort
- Bikeway goes behind stop
- Reduces bus / bike conflict

Potential Back Out Parking Solutions

- Paint conflict paint across driveways
- Add raised bike lanes & widen sidewalks (with lane repurposing)
- Use new road space to provide space to back into
- Long term: policy to remove during redevelopment

Construct Raised Intersection*

- Slows traffic & supports pedestrian crossing (with lane repurposing)

Explore Lane Repurposing & Lower Design Speed via Redesign

- Current volumes same or lower than 2-lane segment
- One 11' lane in each direction, spot medians, left turn lanes
- Slows traffic
- Adds space for bike, walking, and bus infrastructure
- Adds space to address back out parking

Corridor Wide Strategies

Underground Utilities

- Limits sidewalk obstructions

Add Spot Medians

- Limits turning conflicts
- Permits left turns at designated locations

Evaluate Lighting at Crossings

- Address nighttime crashes & visibility

Narrow Side Street Curb Radii / Eliminate Free Right Turn Lanes

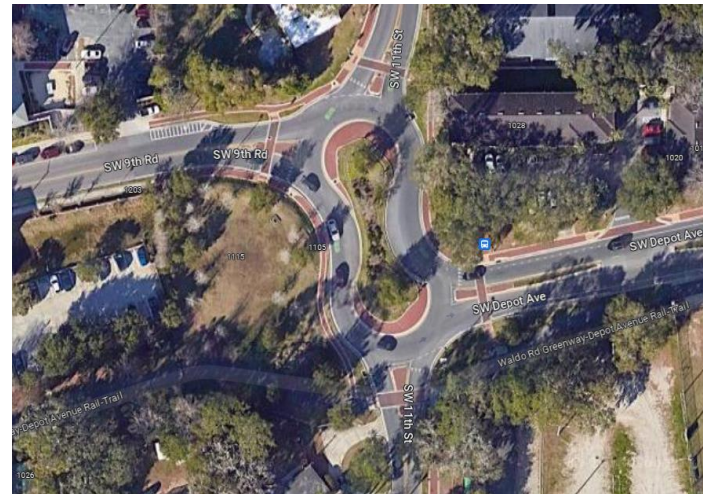
- Slows drivers
- Limits turning conflicts

3 NE 26th St at NE 15th Ave / NE 16th Ave



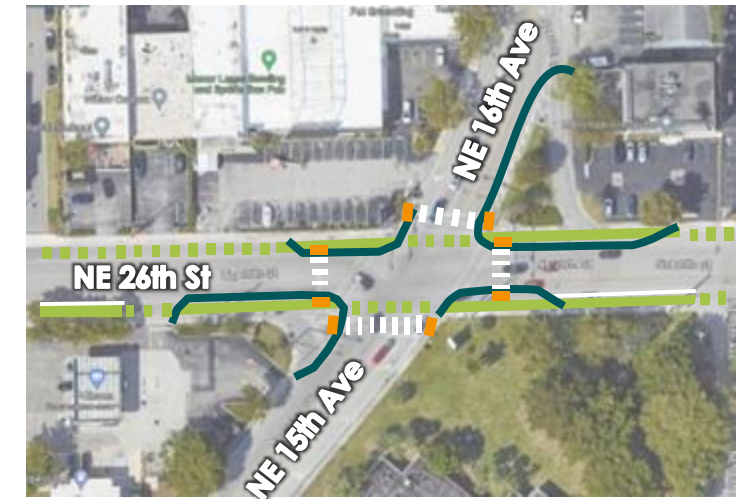
Option 1: Peanut Roundabout

- Slows traffic and eliminates high speed right turns
- Bikes share road with vehicles
- Pedestrian crossings include RRFBs
- Can be mountable for emergency vehicles
- Addresses issues brought on by skew of intersection



Option 2: Geometry Changes

- Eliminates high speed right turns
- Provides space for raised bikeways or bend outs
- Straightens and shortens pedestrian crossings
- Provides directional pedestrian crossings
- Provides space for pocket park or placemaking treatments



3 NE 26th St at Coral Gardens Dr

At Coral Gardens Drive



Raised Bikeway and/or Bike Bend Outs

- Facilitate crossings for people biking
- Protected intersections could also be considered

Directional Curb Ramps

- Improve walking experience for people with disabilities

Lane Repurposing

- Slows traffic
- Narrows crossings
- Provides space for bike infrastructure

Curb Extensions & Reduced Curb Radii

- Slows traffic
- Narrows crossings
- Provides space for bike bend outs

Pedestrian Refuge Island

- Provides space to wait
- Can help slow turning vehicles

Median / Hardened Centerline

- Helps slow turning vehicles

Back Out Parking Treatments

- Conflict striping at driveways
- Potential to raise bikeway to slow drivers backing out
- Bikeway and sidewalk dimensions could be constrained at driveways to provide roadway space for drivers to back into*

Orange bar: 9-10' Back Out Space

Green dashed line: 4' Raised Bikeway (constrained minimum) with Conflict Markings

White dashed line: 5' Sidewalk



**Concept Only. Further design required to determine feasibility at individual properties. Space allocation could also be reversed.*

Summary: Existing Conditions & Key Findings

4 Dixie Hwy

Bus Stops

- Within 250' of Signalized Crossing
- Not within 250' of Signalized Crossing

■ Raised Intersection

— Bike Lane

🚦 Signal



Other General Issues

● Senior housing suggests need to meet the needs of slower pedestrians

RRFBs only have beacons on one side of road

Signal timing is too short to allow a person walking at an average speed (3.5 ft / sec) to fully cross Dixie Hwy

Bike facilities LTS 4 (north of 5 Points)

Long distances between ped. crossings & bus stops far from crossings; encourages people to cross outside of crosswalks

— Driveways & back out parking onto Dixie Hwy creates conflict points

— Missing sidewalk

— Undefined roadway space

Bus stops missing amenities

Buses stop in bike lane

3 serious injury crashes involving people walking south of 5 Points

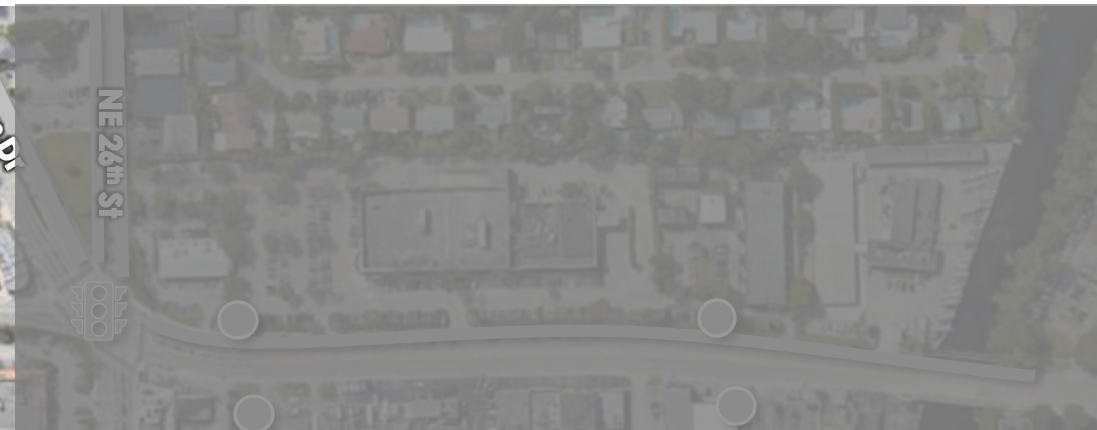
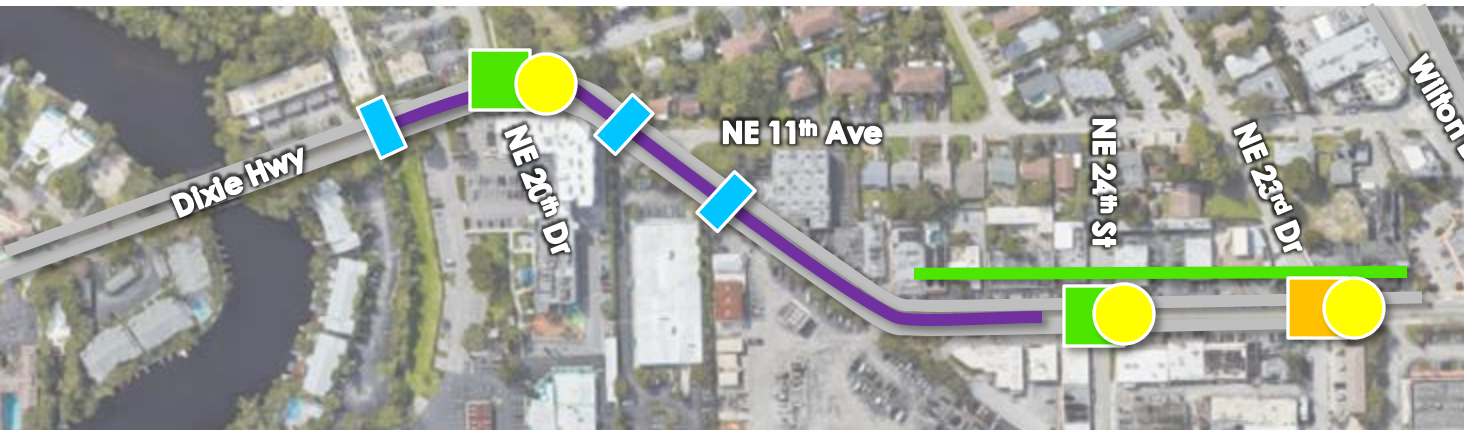
Drivers observed speeding (especially on curves)

Limited lighting at night

Summary: Potential Corridor Treatments

4 Dixie Hwy South of 5 Points

Existing/Committed Facilities



Clearly Define Sidewalk

- Install duratherm treatment between bikeway and sidewalk to define space
- Paint green conflict markings in bike lane



Rebuild Raised Intersection

- Repaint and update surface treatment to increase effectiveness



Construct Raised Intersection

- Slows traffic & supports pedestrian crossing

Update / Install RRFB

- Install double-sided RRFBs on both sides of roadway
- Verify lighting meets current FDM criteria for RRFB crossings

Construct Speed Hump/Table*

- Slows traffic
- Can be placed at offset intersections to facilitate bike movements

Add Lane Definition

- Slows traffic and increases driver alertness
- Add hardened centerline through curve
- Utilize profiled thermoplastic to define bike lane
- Paint bike lanes green / add conflict paint



Corridor Wide Strategies

Evaluate Lighting

- Address nighttime crashes & visibility

Paint Crosswalks at Side Streets & Driveways

Increases visibility and driver alertness

*ITE Guidelines for the Design and Application of Speed Humps recommends spacing of 260' to 500' to keep 85th percentile operating speed between 25 and 30 mph

Summary: Potential Corridor Treatments

4 Dixie Hwy North of 5 Points

Existing/Committed Facilities



Increase Pedestrian Phase

- Allow enough time for average and slower users to cross Dixie Hwy



Construct Median & Convert to Right in / Right Out

- Slow traffic
- Direct crossings to desired locations



New Mid-Block Crossing with PHB

- RRFB if does not meet warrant
- Improves access to bus stops and across Dixie Hwy
- Encourages crossing at designated locations

Add Lane Definition

- Slow traffic and increase driver alertness
- Utilize profiled thermoplastic to define nonmotorized space

Corridor Wide Strategies

Underground Utilities

- Limits sidewalk obstructions

Evaluate Lighting

- Address nighttime crashes & visibility

Add Wayfinding

- Direct pedestrians to use sidewalk on east side





Long Term Strategies

As Redevelopment Occurs...

- Require developers to provide parking on site with designated driveway access
- Construct sidewalk on east side
- Construct sidewalk level separated bike lanes with conflict markings
- Construct new marked crossings with PHBs at additional locations east of the bridge and at main entrance to Publix Shopping center
- Construct Bus Islands
- Redesign road to 30 MPH design speed and add raised crosswalks

Summary: Existing Conditions & Key Findings

5 NE 24th St (western segment)

-  Bike Lane
-  Signal
-  Mid-Block Crossing (RRFB) (Proposed)
-  Bus Stop Within 250' of Signalized Crossing



Long distances between ped. Crossings; encourages people to cross outside of crosswalks


No bike facilities; LTS 3

Several serious injury crashes involving people walking

Other General Issues

People biking share the roadway with people driving; additional comfort features needed

Limited wayfinding for nonmotorized users directing to destinations

 Missing sidewalk
No lighting; dark at night

Lack of marked crosswalks & faded markings at intersections

School pick up / drop off queueing

Summary: Potential Corridor Treatments

5

NE 24th St (western segment)

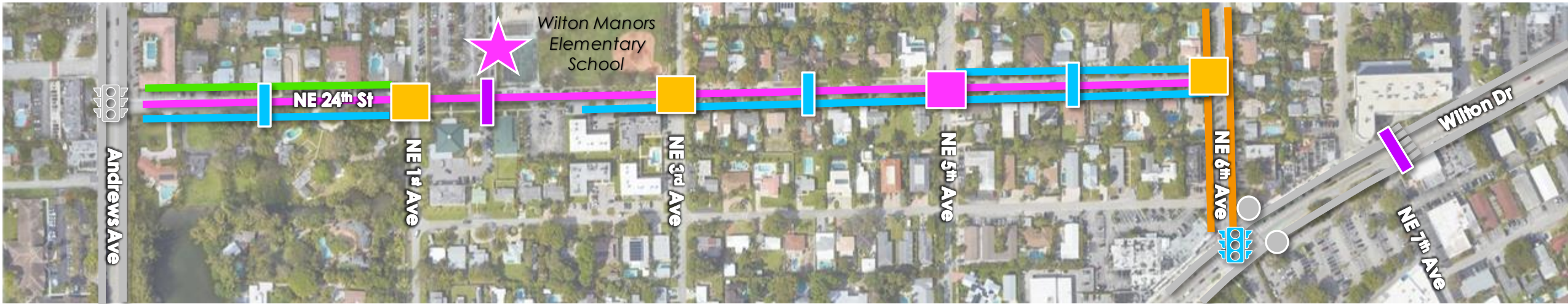
Existing/Committed Facilities

 Bike Lane

 Mid-Block Crossing

 Signal

 Bus Stop



 **Construct Sidewalk***

 **Add All Pedestrian Phase**

 **Raised Crossing with RRFB**

 **Evaluate School Circulation Needs**

 **Construct Raised Intersection**

- Slows traffic & supports pedestrian crossing

- Phase exclusively for pedestrians; all directions cross at once
- See intersection slide for additional suggested improvements

- Proposed enhancement to crossing currently in design
- Slows traffic & supports pedestrian crossing

Corridor Wide Strategies

 **Construct Speed Hump/Table****

- Slows traffic
- Can be placed at offset intersections to facilitate bike movements

 **Clearly Define Sidewalk**

- Install duratherm treatment to define space

 **Paint Shared Lane Markings**

- Sign as bike boulevard
- Alerts drivers to presence of people biking
- Provides wayfinding for people biking

Evaluate Lighting

- Address nighttime visibility, especially for pedestrians

 **Paint Bike Lane**

 **Mark Crosswalks at Intersection**

- Supports pedestrian crossing

Add Wayfinding Signage

- Identify best routes to nearby destinations

*Sidewalk in Lazy Lake requires coordination with Lazy Lake

5 Wilton Dr at NE 6th Ave & NE 7th Ave



Addressing Left Turns

- Utilize hardened centerline to guide left turning drivers

Addressing Right Turns

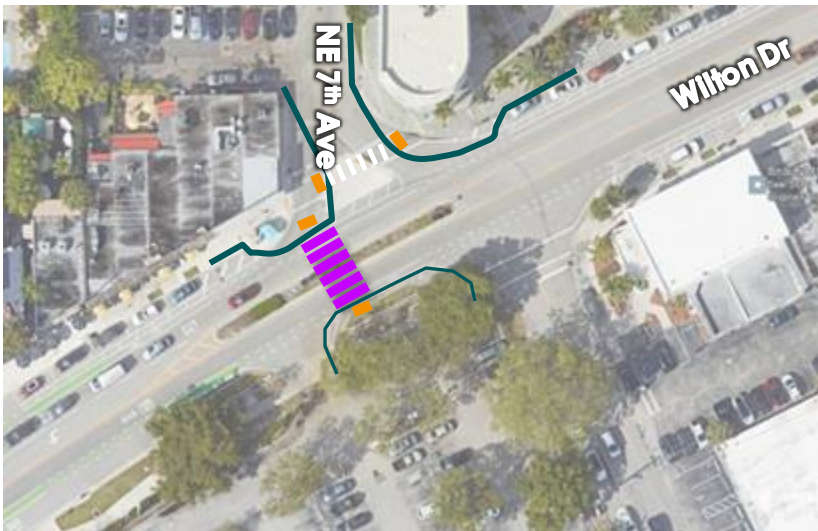
- Realign intersection and install curb extension and reduce curb radius on SW, NE, and NW corner to slow drivers and prevent drivers from using bus lane as turn lane
- Shift SB bus stop north to provide space for curb extension

Walking Improvements

- Implement all pedestrian phase
- Build curb extensions to reduce pedestrian crossing distance

Biking Improvements

- Allow bikes to use all pedestrian phase
- Install bike boxes on all legs of intersection or construct protected intersection



Addressing Right Turns

- Realign northern leg of NE 7th Ave intersection to a T intersection
- Remove porkchop and high speed Right turn lanes

Walking Improvements

- Move proposed crosswalk to pedestrian desire line south of NE 7th Ave
- Convert proposed crosswalk with RRFB and median refuge to raised crosswalk with RRFB and median refuge
- Consider raised crosswalk along northern leg of intersection
- Evaluate pedestrian lighting

Summary: Existing Conditions & Key Findings

5 NE 24th St (eastern segment)



-  Bus Stop
-  Speed Hump
-  Bike Lane
-  Signal
-  Mid-Block Crossing
-  Raised Intersection



Long distances between marked ped. Crossings; encourages people to cross outside of crosswalks

Commonly used pedestrian path in private ROW

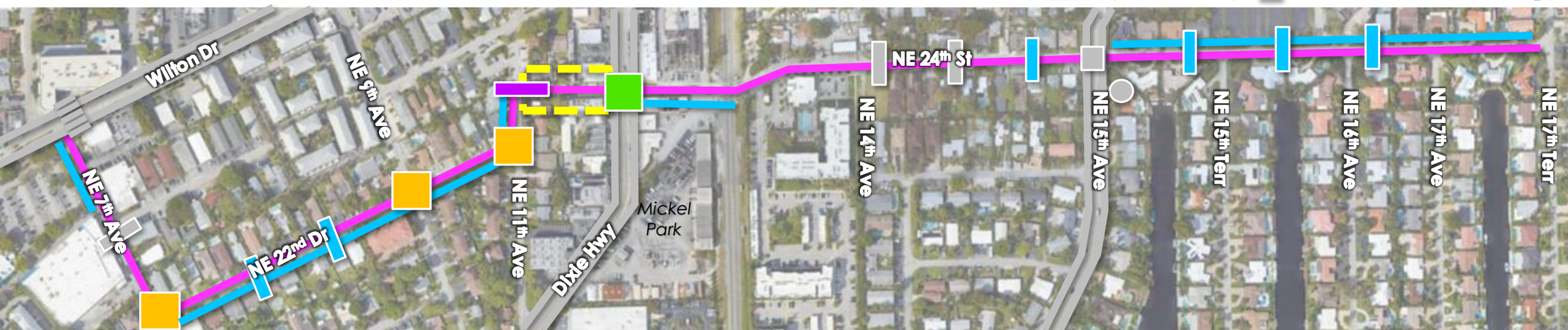
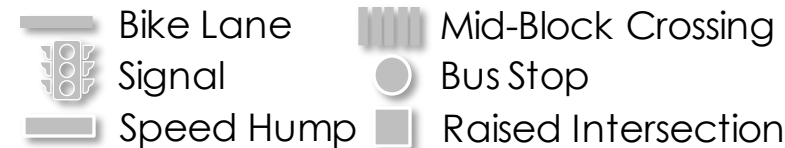
Other General Issues

-  Driveways & back out parking creates conflict points
-  Missing sidewalk
- People biking share the roadway with people driving; additional comfort features needed
- Limited wayfinding for nonmotorized users directing to destinations
- No lighting; dark at night
- Lack of marked crosswalks & faded markings at intersections

Summary: Potential Corridor Treatments

5 NE 24th St (eastern segment)

Existing/Committed Facilities



Construct Sidewalk

- Only on noted side of the street
- Remove on street parking to make space for sidewalk with curb on NE 7th Ave

Construct Speed Hump/Table

- Slows traffic
- Can be placed at offset intersections to facilitate bike movements

Purchase New Access Easement

- Allows people to walk and bike through property

Construct Raised Intersection*

- Slows traffic & supports pedestrian crossing

Paint Shared Lane Markings

- Sign as bike boulevard
- Alerts drivers to presence of people biking
- Provides wayfinding for people biking

Rebuild Raised Intersection

- Includes RRFB
- See Dixie Hwy Projects

New Raised Crossing with RRFB

- Slows traffic & supports pedestrian crossing

Corridor Wide Strategies

Evaluate Lighting

- Address nighttime visibility, especially for pedestrians

Add Wayfinding Signage

- Identify best routes to nearby destinations

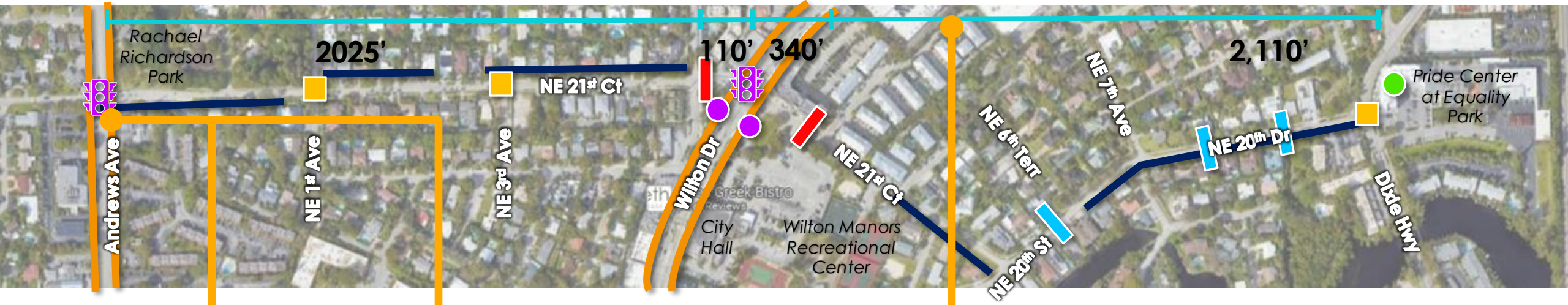
Narrow Side Street Curb Radii / Eliminate Free Right Turn Lanes

- Slows drivers
- Limits turning conflicts

Summary: Existing Conditions & Key Findings

6 NE 21st Ct / NE 20th St

- Raised Intersection
- ▬ Speed Hump
- ▬ Unsignalized Crossing
- ⦿ Signal
- Bus Stop
- ▬ Bike Lane



Signal timing is too short to allow a person walking at an average speed (3.5 ft / sec) to fully cross Andrews Ave

No dedicated left turn phase at Andrews Ave

Long distances between marked ped. Crossings; encourages people to cross outside of crosswalks

● Senior housing suggests need to meet the needs of slower pedestrians

Other General Issues

People biking share the roadway with people driving; additional comfort features needed

Limited wayfinding for nonmotorized users directing to destinations

▬ Missing sidewalk
No lighting; dark at night

Lack of marked crosswalks & faded markings at intersections

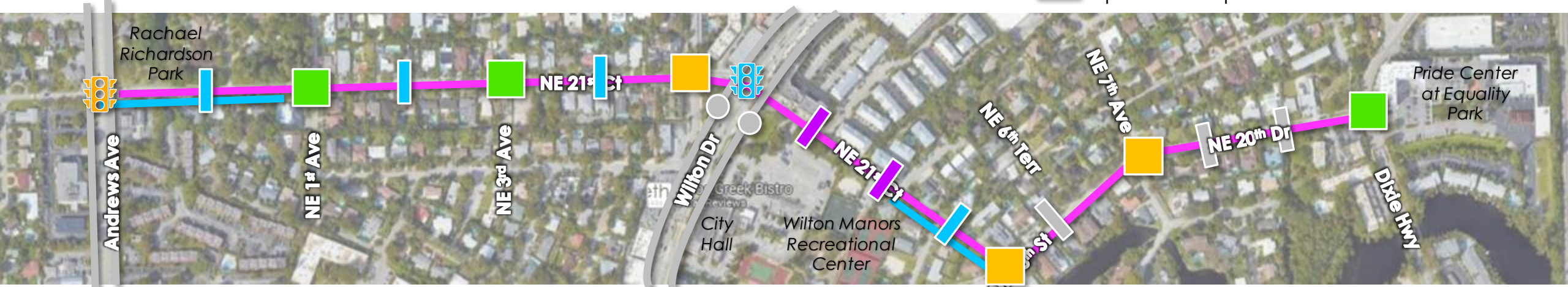
Existing raised intersections missing pedestrian features and markings to identify grade change

Summary: Potential Corridor Treatments

6 NE 21st Ct / NE 20th St

Existing/Committed Facilities

-  Bike Lane
-  Signal
-  Speed Hump
-  Bus Stop
-  Raised Intersection



Construct Raised Intersection

- Slows traffic & supports pedestrian crossing

Rebuild Raised Intersection

- Include crosswalks and appropriate markings
- Slows traffic & supports pedestrian crossing

Increase Pedestrian Phase

- Allow enough time for average and slower users to cross Andrews Ave

New Raised Crossing with RRFB

- Slows traffic & supports pedestrian crossing

Add All Pedestrian Phase

- Phase exclusively for pedestrians; all directions cross at once
- See intersection slide for additional suggested improvements

Construct Sidewalk

- Only feasible with utility undergrounding

Construct Speed Hump/Table*

- Slows traffic
- Can be placed at offset intersections to facilitate bike movements

Paint Shared Lane Markings

- Sign as bike boulevard
- Alerts drivers to presence of people biking
- Provides wayfinding for people biking

Corridor Wide Strategies

- Evaluate Lighting**
 - Address nighttime visibility, especially for pedestrians
- Underground Utilities**
 - Limits sidewalk obstructions
- Widen Sidewalk**
 - Widen to 8' where feasible
- Narrow Side Street Curb Radii**
 - Slows drivers
 - Limits turning conflicts
- Add Wayfinding Signage**
 - Identify best routes to nearby destinations

*ITE Guidelines for the Design and Application of Speed Humps recommends spacing of 260' to 500' to keep 85th percentile operating speed between 25 and 30 mph

6 NE 21st Ct at Wilton Drive



Addressing Left Turns

- Utilize hardened centerline to guide left turning drivers

Addressing Right Turns

- Install curb extension and reduce curb radius on NW corner to slow drivers and reduce pedestrian crossing distance

Walking Improvements

- Implement all pedestrian phase
- Widen sidewalk on north side on NE 21st Ct

Biking Improvements

- Allow bikes to use all pedestrian phase
- Install bike boxes on all legs of intersection

Summary: Existing Conditions & Key Findings




West Side Example

Summary of Key Findings

 Speed Hump

 Missing Sidewalk



 Driveways & back out parking creates conflict points

 Missing sidewalk

General Issues

West Side Traffic Calming Study calls for a number of traffic calming treatments

Limited lighting at night

Drivers observed speeding / desired traffic calming

Large turning radii encourage fast turning movements

No bicycle facilities

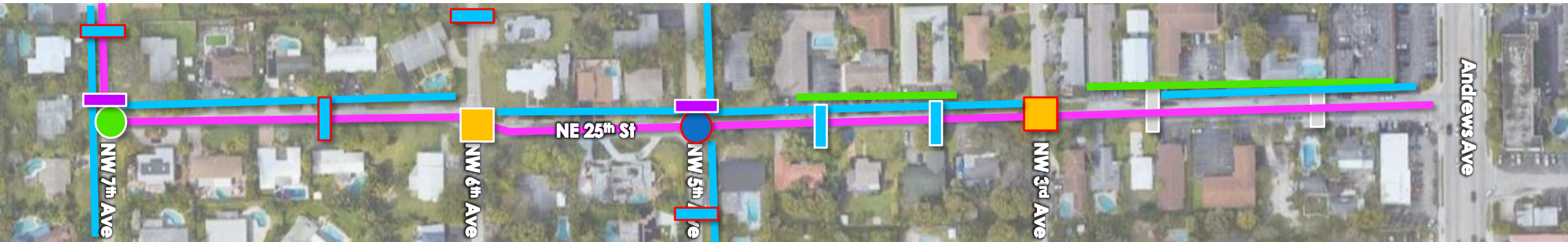
No painted crosswalks

No designated bike route

Summary: Potential Corridor Treatments

West Side Example

- Speed Hump (Existing)
- Speed Hump (Proposed)
- Raised Intersection (Proposed)
- Flashing LED Stop Sign (Proposed)



Construct Speed Hump/Table*

- Slows traffic

Reduce Curb Radii

- Slows left turning traffic

Paint Shared Lane Markings

- Sign as bike boulevard
- Alerts drivers to presence of people biking
- Provides wayfinding for people biking

Construct Raised Intersection

- Slows traffic & supports pedestrian crossing

Construct Sidewalk

- Only on noted side of the street

New Raised Crossing with RRFB

- Slows traffic & supports pedestrian crossing

Clearly Define Sidewalk

- Install duratherm treatment to define space

Corridor Wide Strategies

Evaluate Lighting

- Address nighttime visibility, especially for pedestrians

Narrow Side Street Curb Radii

- Slows drivers
- Limits turning conflicts

Add Wayfinding Signage

- Identify best routes to nearby destinations

Paint Crosswalks at Side Streets & Driveways

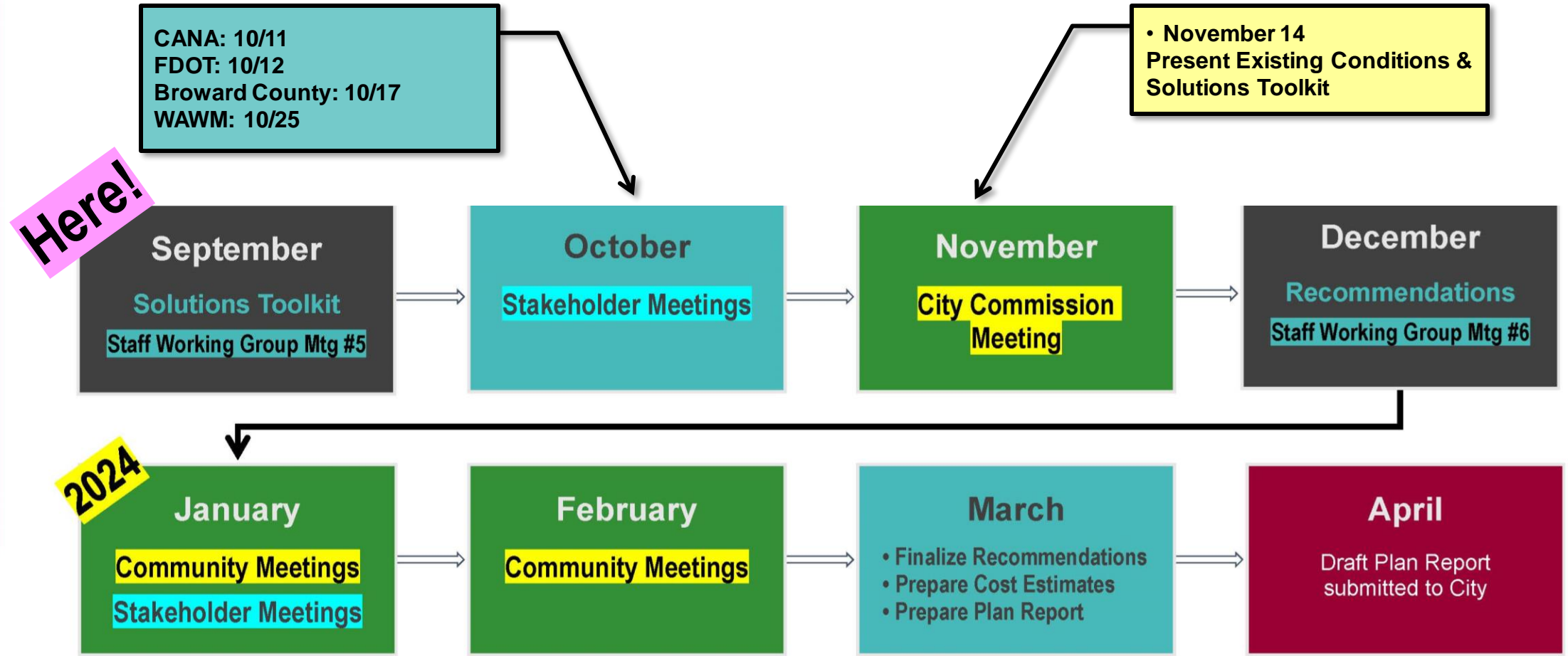
- Increases visibility and driver alertness

*ITE Guidelines for the Design and Application of Speed Humps recommends spacing of 260' to 500' to keep 85th percentile operating speed between 25 and 30 mph

Next Steps



City Action items
1. Provide feedback on Summary of Potential Treatments (2 weeks)





Transportation Master Plan