

City of Dothan

Honeysuckle Road Improvements

ASCE Winter Meeting

March 7, 2019

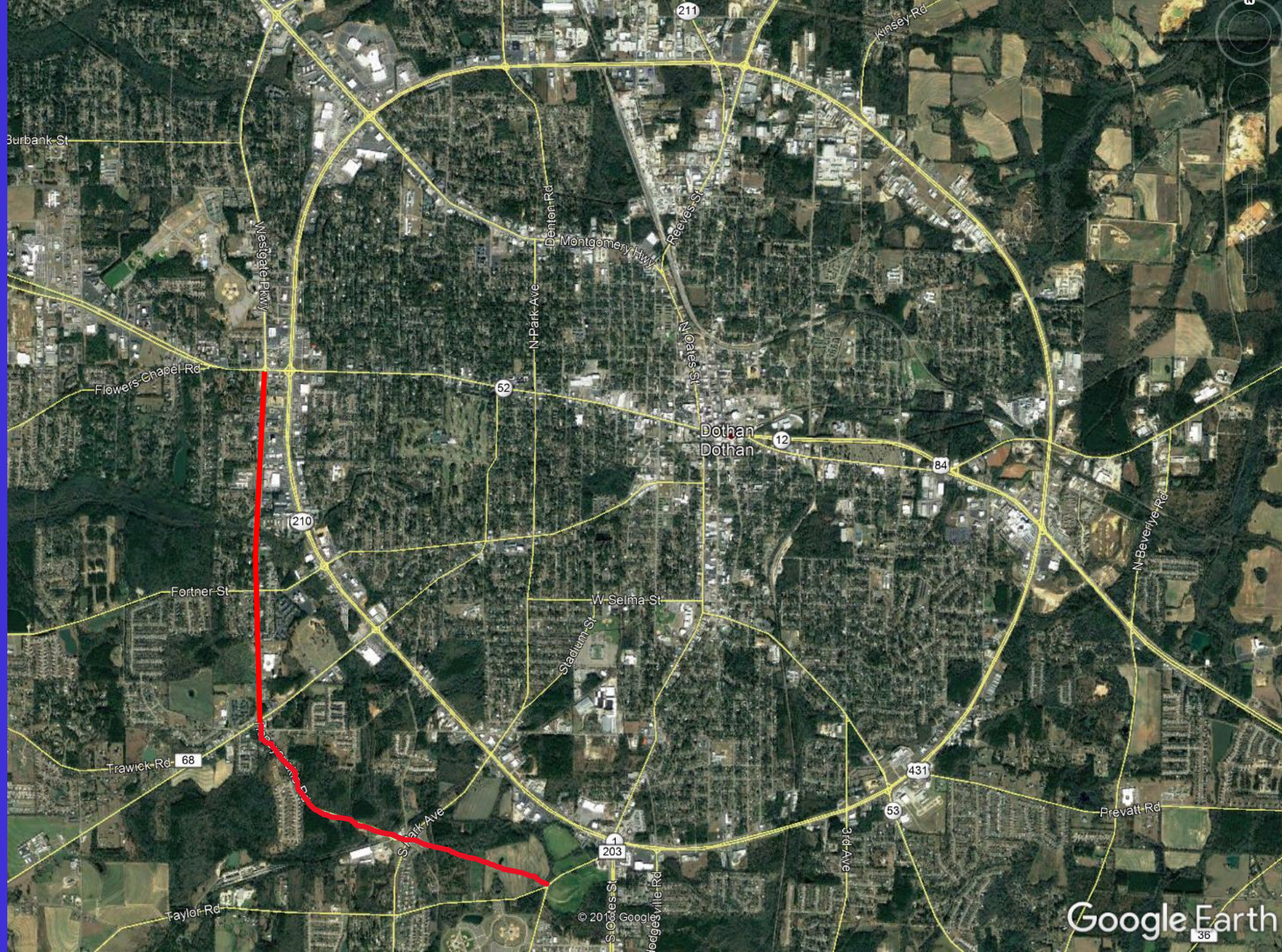
Dothan, AL

Blair Perry, P.E.

Principal / Alabama State Transportation Leader

Gresham Smith

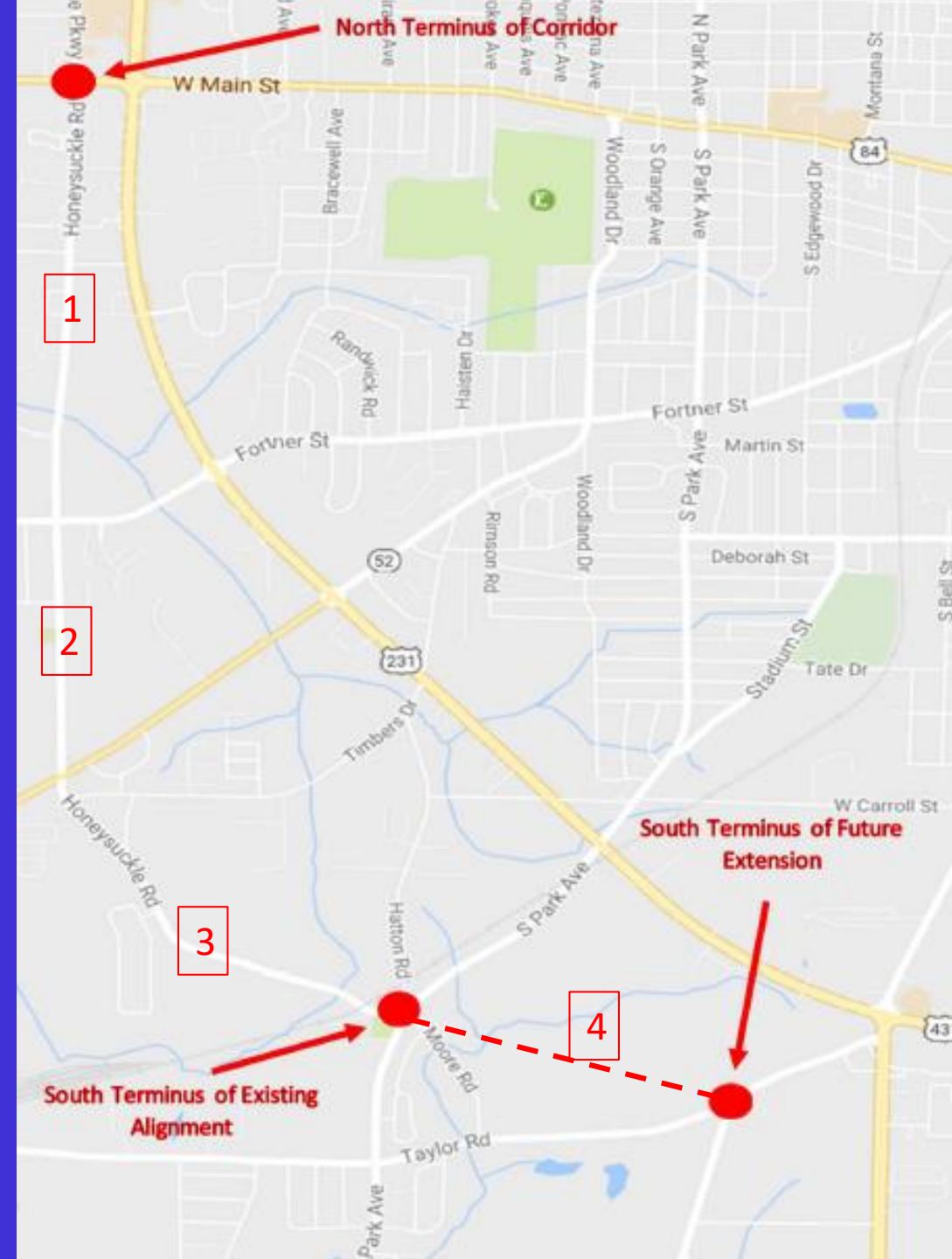


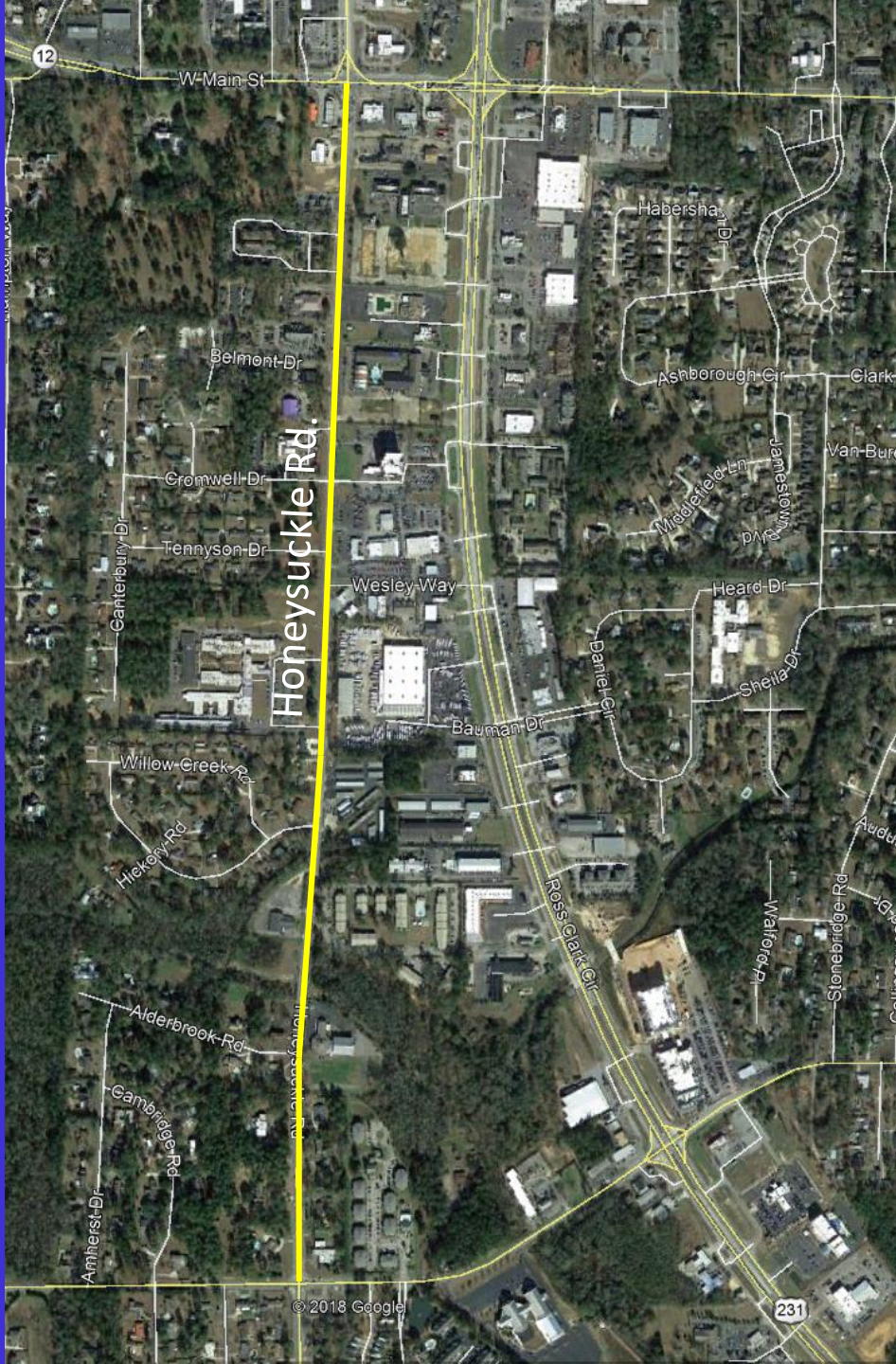


Honeysuckle Road Corridor Study

Study Area

- W. Main Street (US-84) to Campbellton Highway
- Four segments
 1. W. Main St to Fortner Street
 2. Fortner St. to Hartford Hwy. (AL Hwy. 52)
 3. Hartford Hwy. to South Park Ave.
 4. Extension to Campbellton Hwy.





Segment 1

W. Main Street (US-84) to Fortner St.

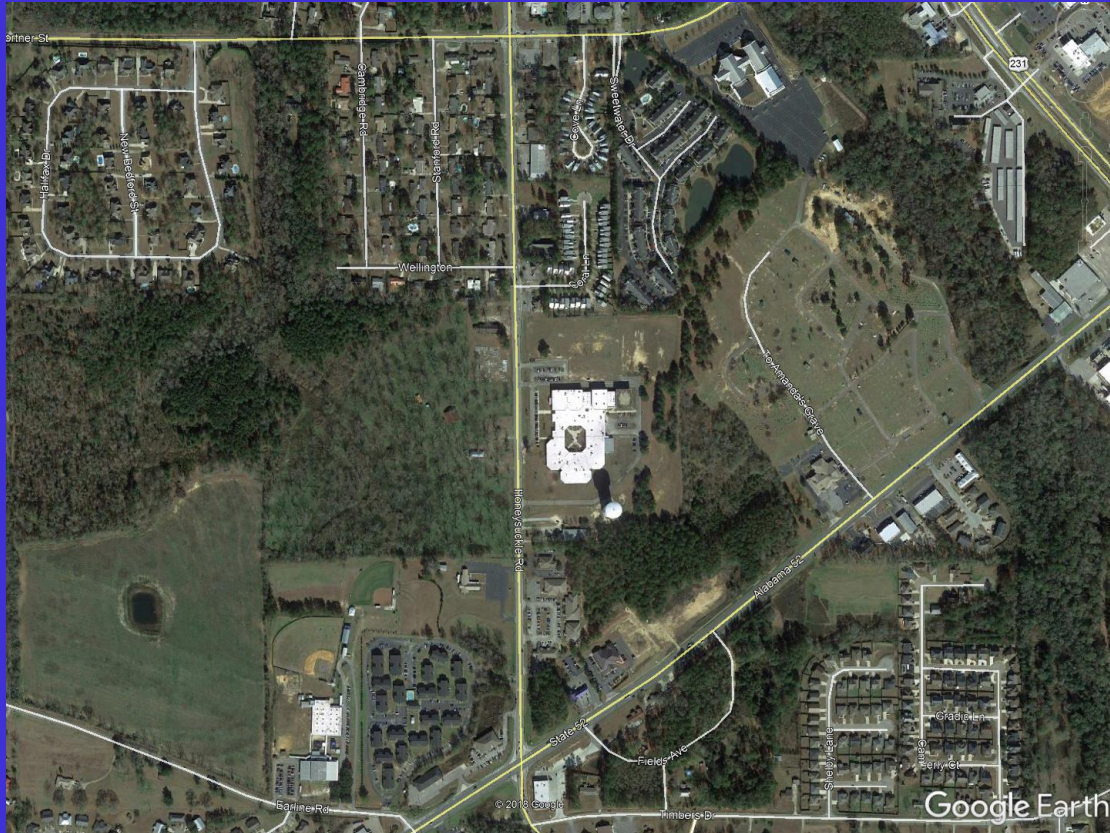
- Existing three-lane curb & gutter section
- 38' wide
- Urban/developed context



Segment 2

Fortner St. to Hartford Hwy. (AL Hwy. 52)

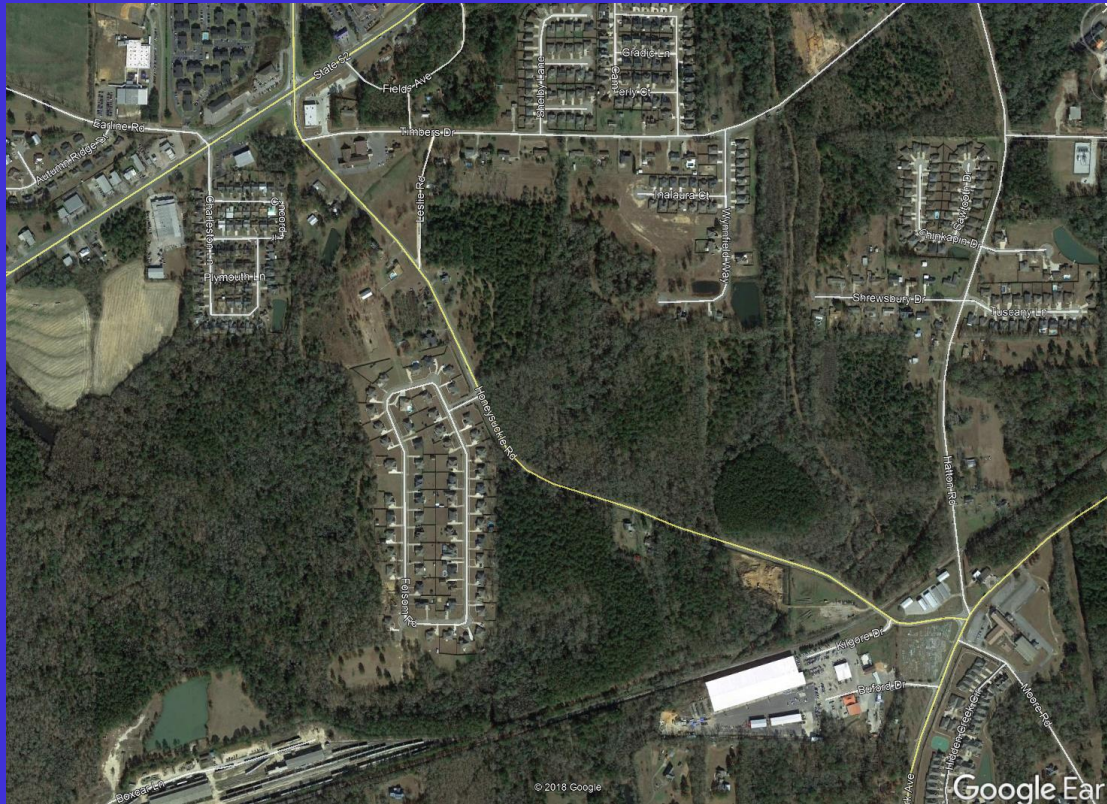
- Existing three-lane curb & gutter section
 - 1 NB lane & 2 SB lanes
- Sidewalk along most of east side
- Residential, commercial & school
- West side largely undeveloped



Segment 3

Hartford Hwy. to South Park Ave.

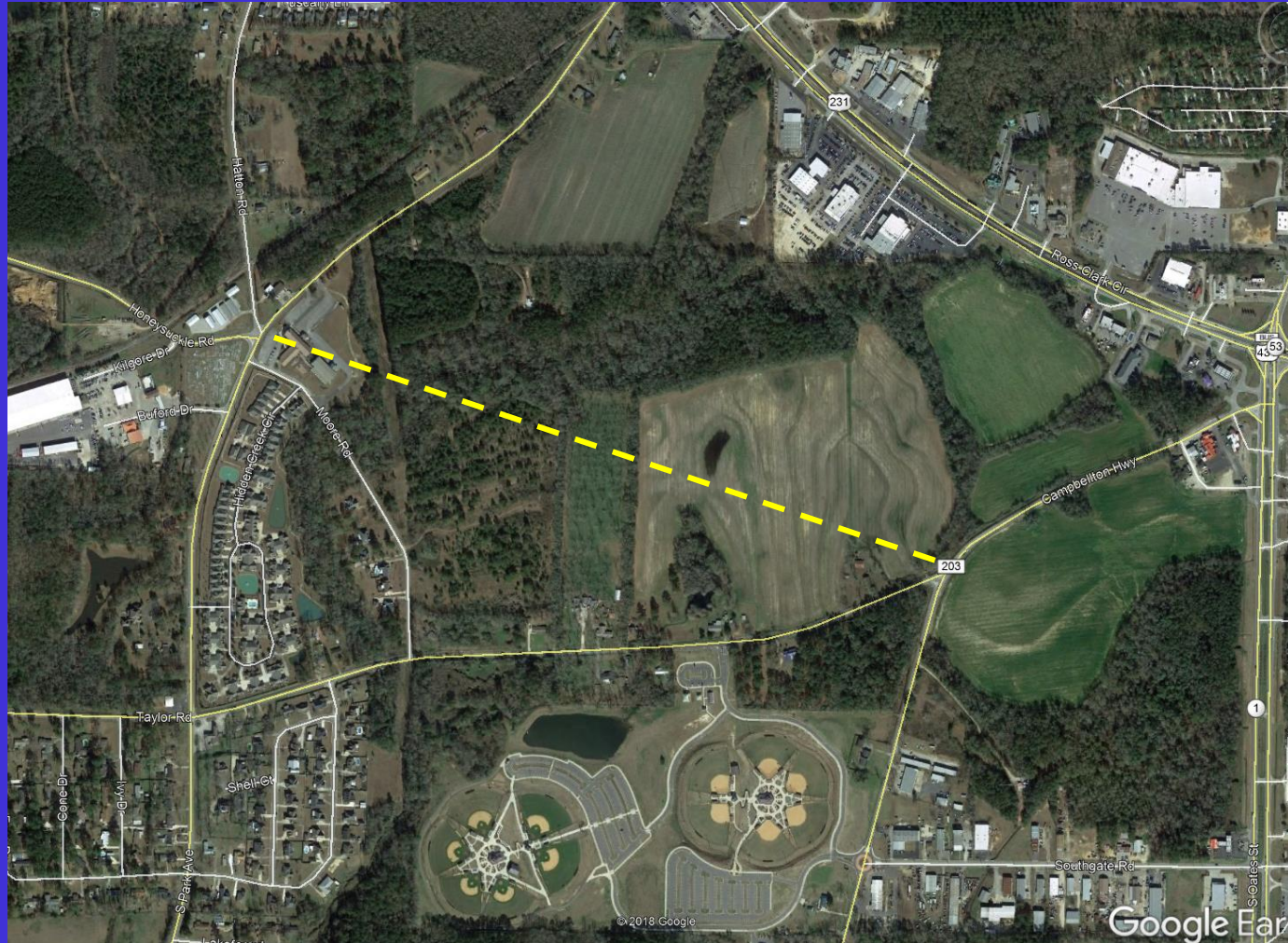
- Two lane rural section
- 21'-22' wide
- Residential
- Much of segment currently undeveloped
 - Residential development planned



Segment 4

Honeysuckle Rd. extension from S. Park Ave. to Campbellton Hwy.

- Undeveloped land

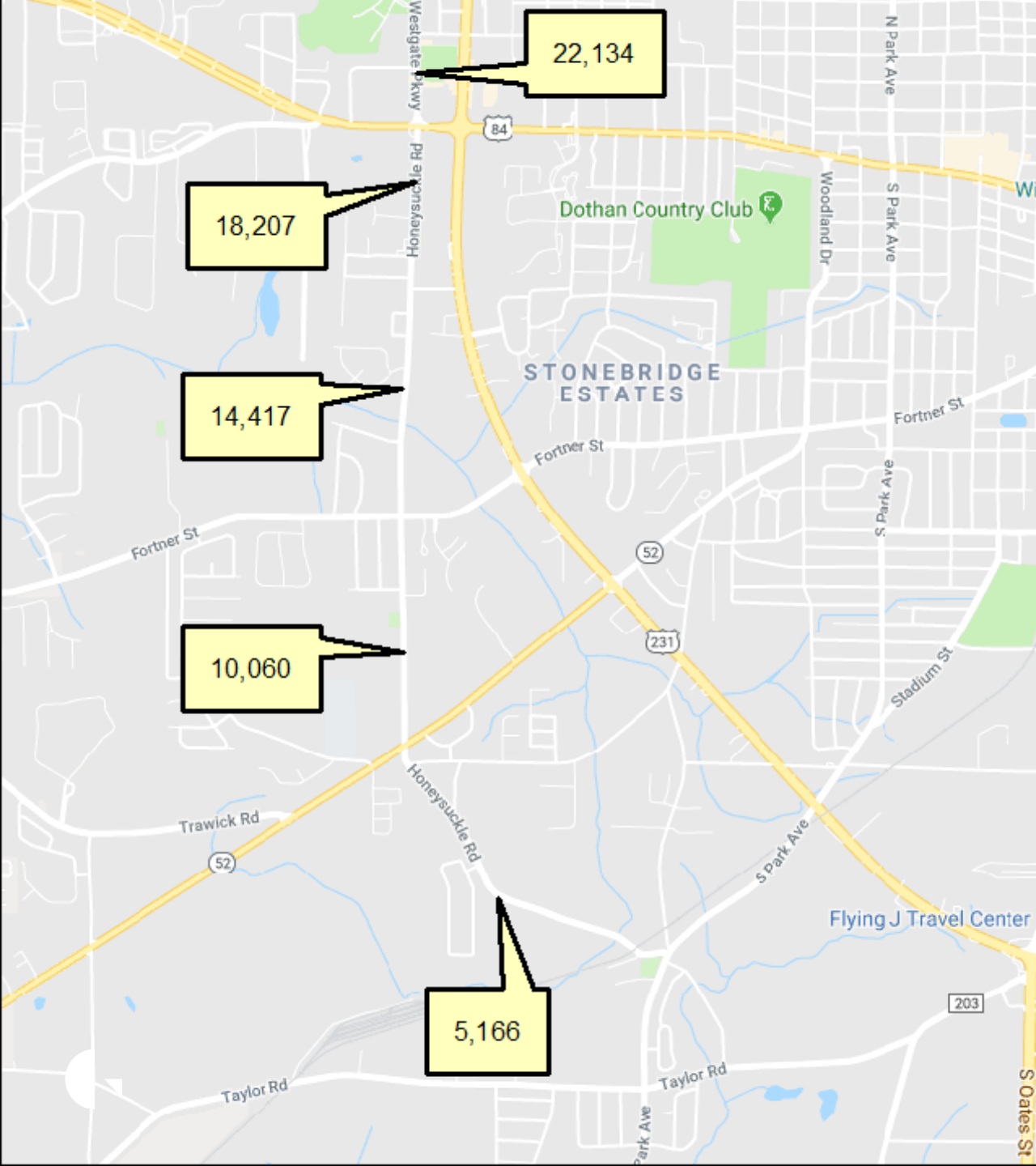


Project Tasks

- Assess potential improvements in roadway capacity and safety deficiencies as well as the impact of future growth along the corridor.
- Provide detailed concept plans showing roadway widening and intersection improvements.
- Prepare construction cost estimates for a variety of recommended improvements including right-of-way acquisition and utilities relocation.
- Recommend funding priority.



Traffic Analysis



2017 Daily Vehicle Volumes

Traffic Analysis Assumptions

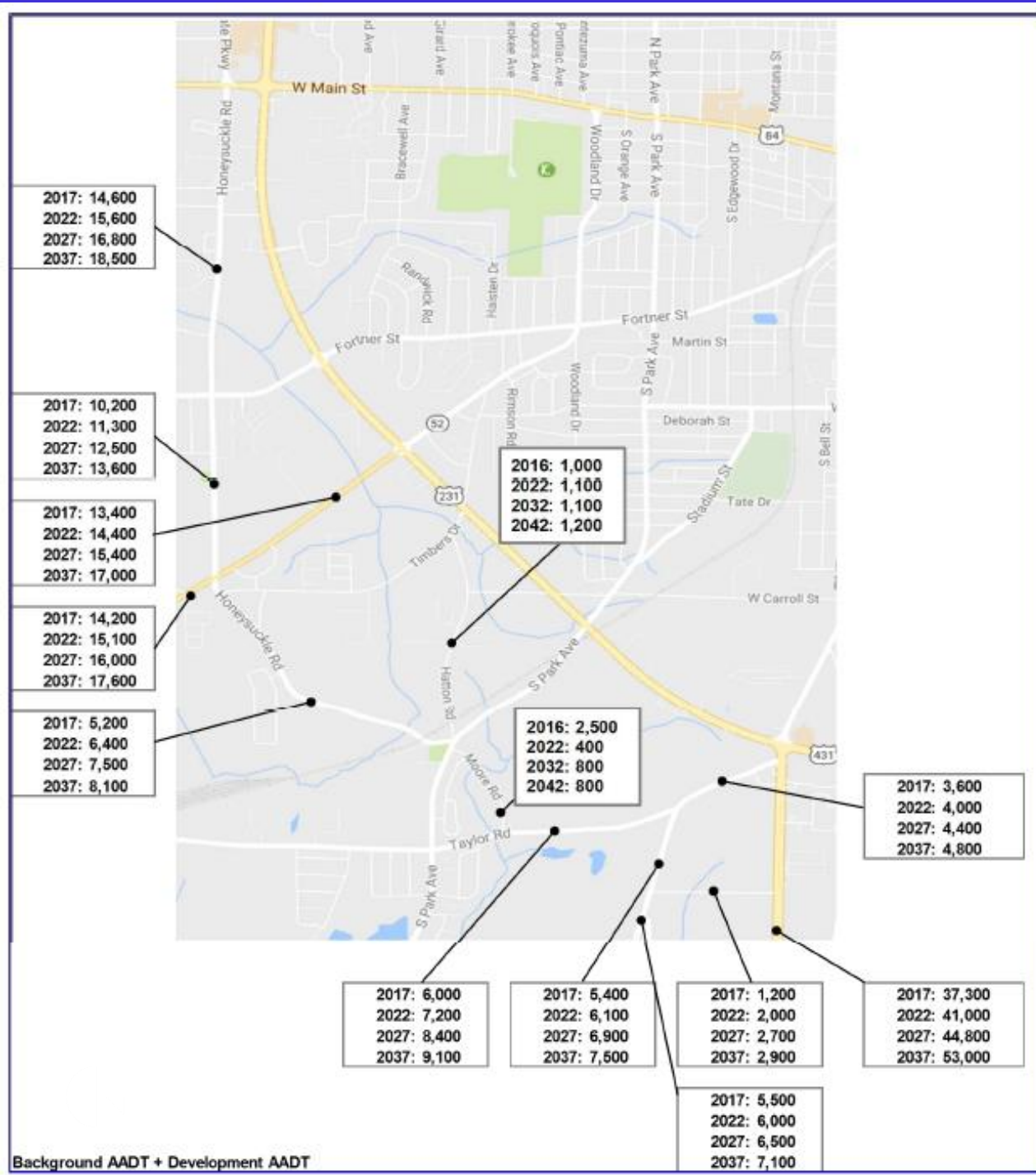
Future traffic

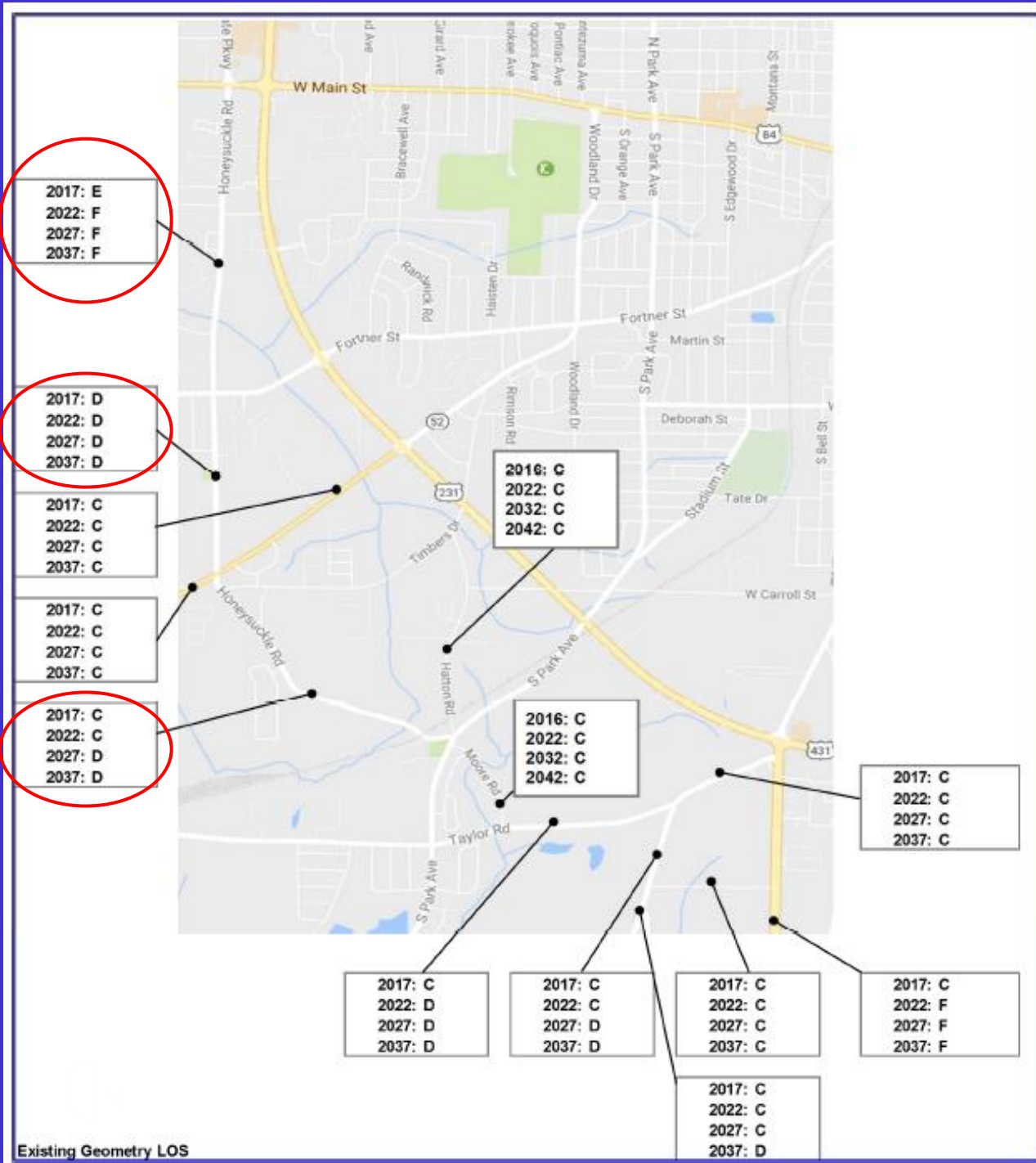
- 1% growth in background traffic
- Analysis years
 - 2017 (Existing year)
 - 2022 (Opening year)
 - 2027 (10 years)
 - 2037 (20 years)
- Additional traffic from proposed development



Roadway Segment Traffic Analysis

Projected Daily Vehicle Volumes



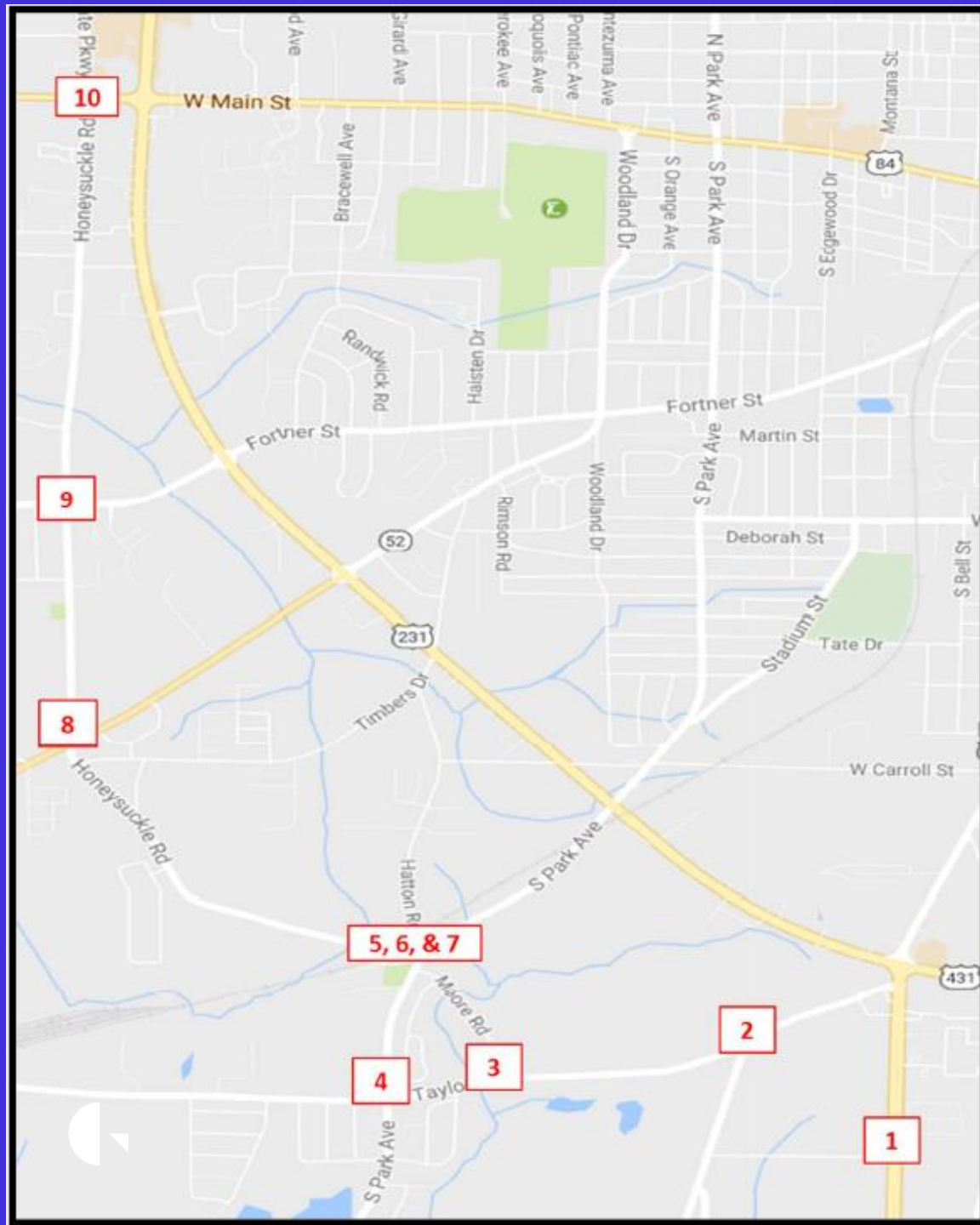


Projected No-Build Level of Service (LOS)

Intersection Traffic Analysis

Study Area Intersections

- 10 intersections
- Focus intersections
 - #10 – Honeysuckle Rd. at W. Main St.
 - #5,6 & 7 – Honeysuckle Rd. at S. Park Ave./Hatton Rd./Moore Rd.
 - #4 S. Park Ave. at Taylor Rd.



W. Main Street (US-84) & Westgate Parkway/Honeysuckle Rd



W. Main Street & Westgate Parkway/Honeysuckle Road
PM Rush Hour



W. Main Street & Westgate Parkway/Honeysuckle Rd. Intersection Operational Analysis Existing Conditions (2017)

	Level of Service	PM Peak Hour Delay (s/veh)	Queue Length (ft.)
Existing Conditions (One Southbound Through Lane)	F	102	1,225

- Overall Intersection Level of Service (LOS)
 - AM Peak Hour – LOS E
 - PM Peak Hour – LOS E



Honeysuckle Rd. at S. Park Ave./Hatton Rd./Moore Rd.

- Three intersections within less than 200'
- Existing AM Peak LOS B
- Existing PM Peak LOS B



S. Park Ave. at Taylor Rd.



- All-way stop controlled
- Existing AM Peak LOS B
- Existing PM Peak LOS F

Crash Analysis

Honeysuckle Rd. at S. Park Ave./Hatton Rd./Moore Rd.

- Three intersections within less than 200'
- 21 crashes 2010-2016
- 9 rear-end crashes (43%)
- 10 turning crashes (48%)

Year	Manner of Collision						Total
	Angle	Head On	Rear End	Sideswipe	Left Turn	Other (Single-Vehicle)	
S. Park Avenue from Hatton Road to Moore Road							
2010	0	0	3	1	0	0	4
2011	1	0	0	0	0	1	2
2012	1	1	0	2	0	0	4
2013	0	0	3	0	0	0	3
2014	0	0	1	0	2	1	4
2015	0	0	0	0	1	0	1
2016	0	0	2	1	0	0	3
Total	2	1	9	4	3	2	21



Honeysuckle Rd. at South Park Ave./Hatton Rd./Moore Rd.

2014-2016 Crashes

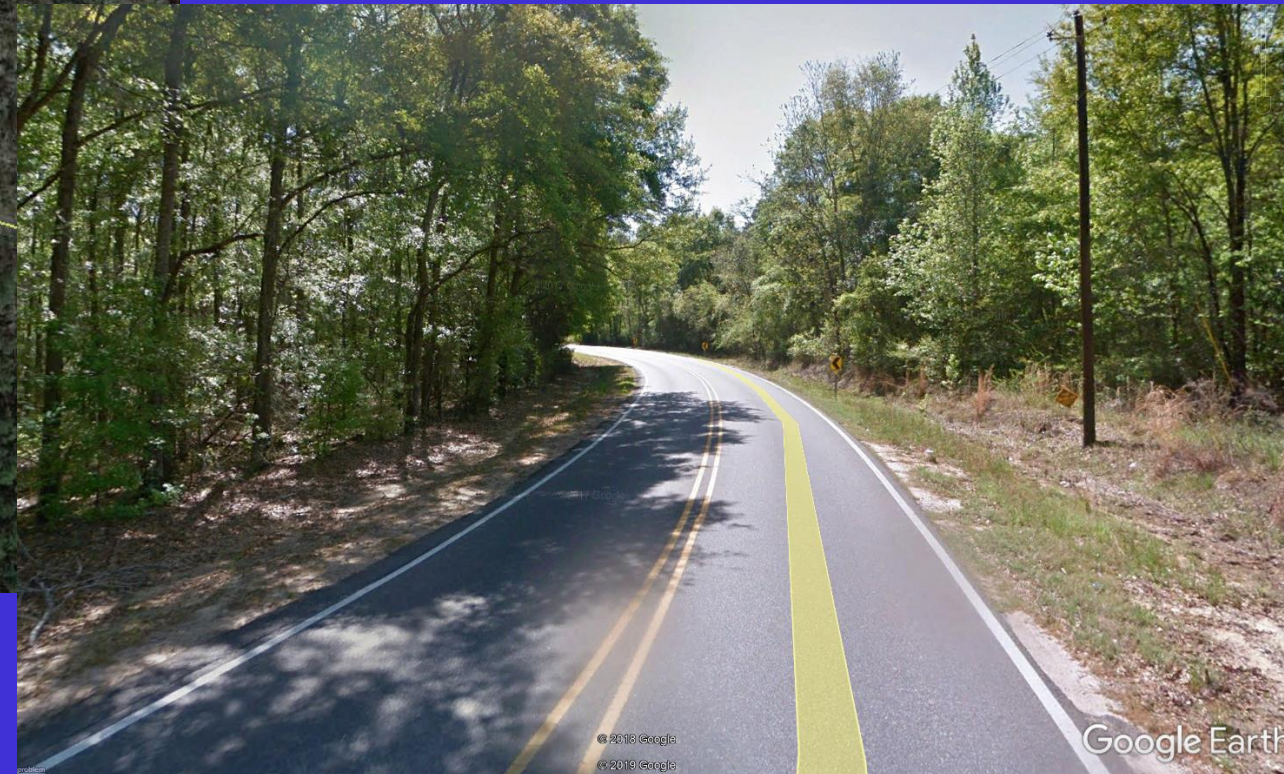
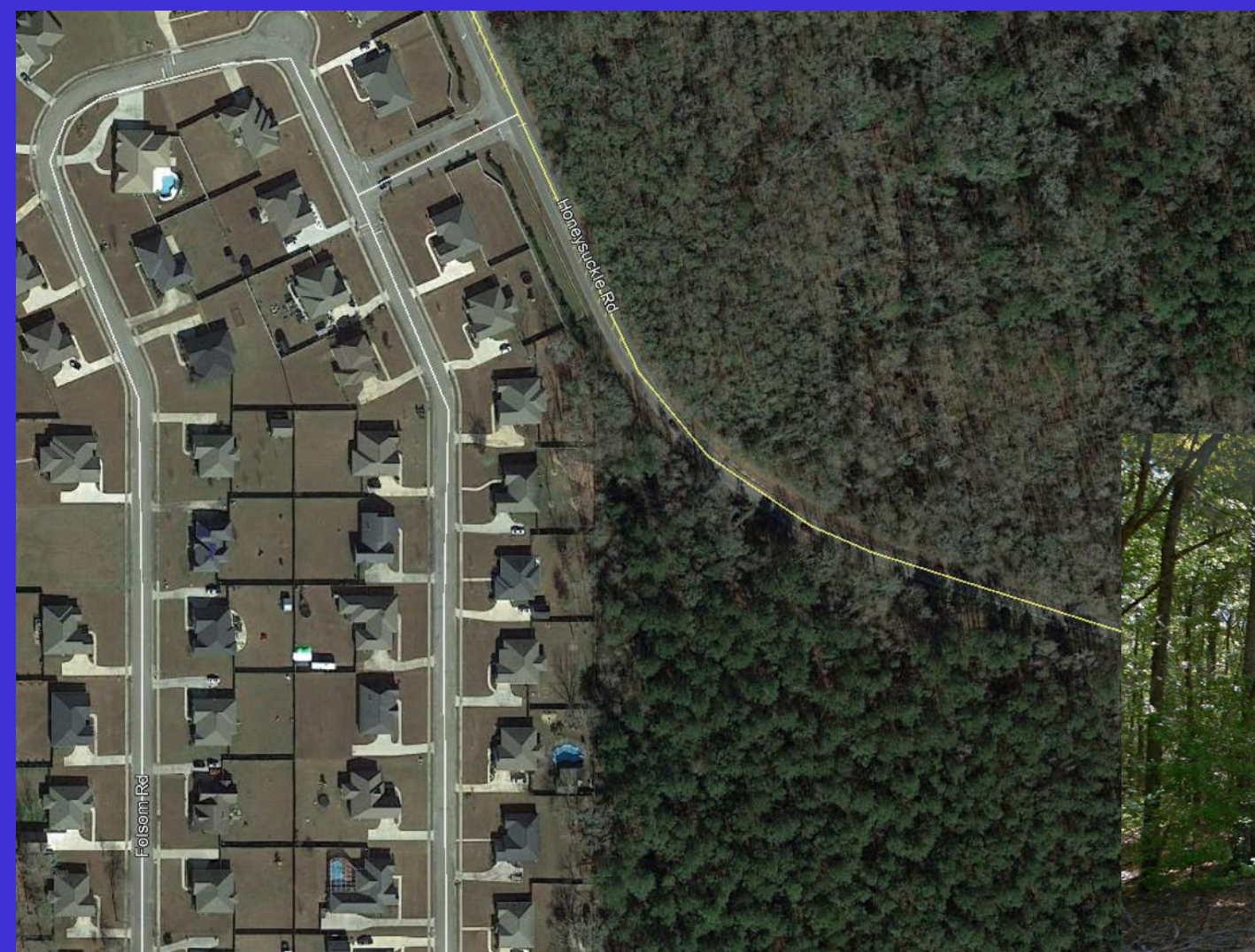


- 8 crashes
 - 3 rear-end (38%)
 - 4 turning (50%)
 - 7 Property Damage Only (PDO)
 - 1 Injury

CRASH WITH INJURY	⊕	REAR-END COLLISION	→ ←
CRASH WITH PDO	#	OUT OF CONTROL	~
SIDE SWIPE	↗↘	TURNING COLLISION	→↘

Honeysuckle Rd. south of Homestead Rd.

- 2 reported crashes in 2014
- More unreported crashes



Honeysuckle Rd. south of Homestead Rd.



- Compound horizontal curve 510'/740' radii
- 40 mph posted speed → e 7.9% & 6.9%
- Field-measured superelevation
 - NB lane varies 8.6% to 2.5%
 - SB lane varies 4.0% to -2.3%
- No paved shoulders

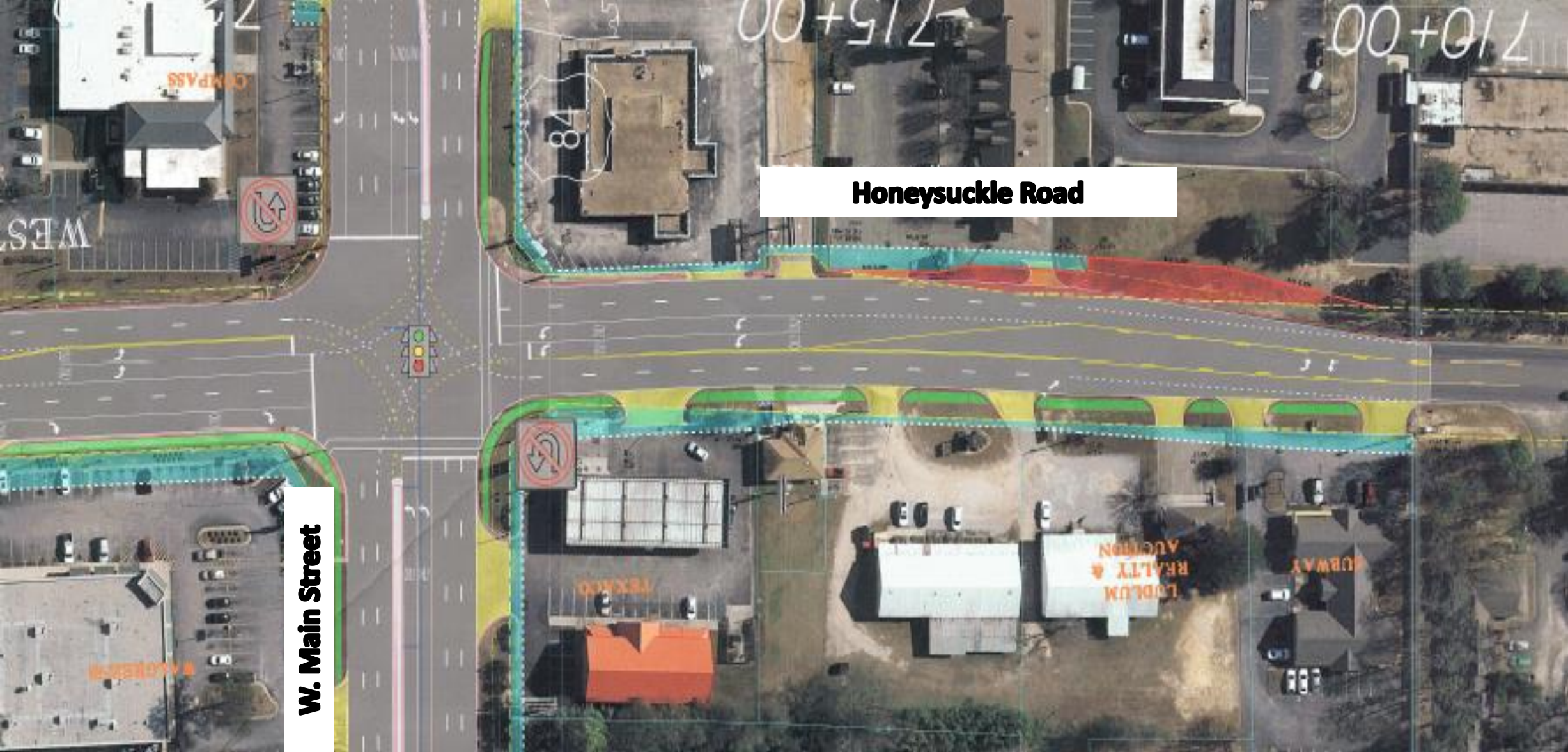


Improvement Alternatives

Segment 1

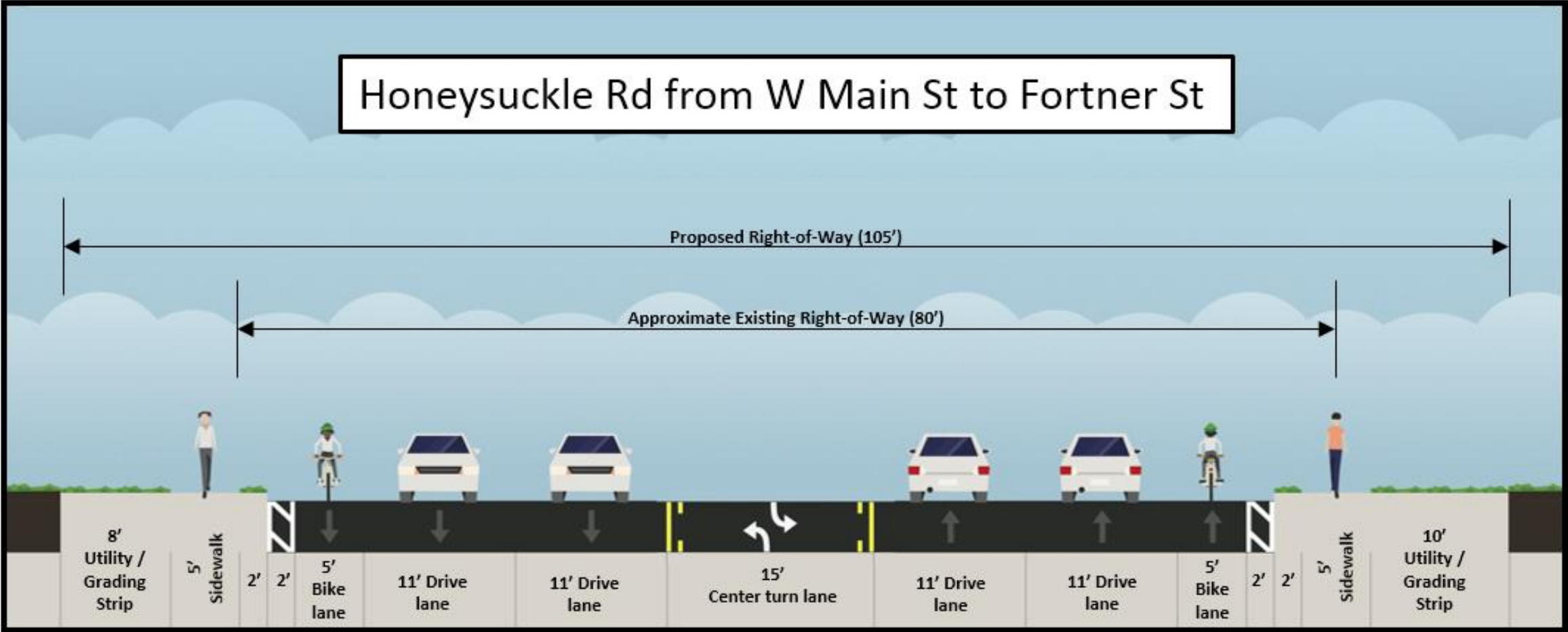
W Main St. to Fortner St.

ALDOT Improvements – W. Main St at Honeysuckle Rd.



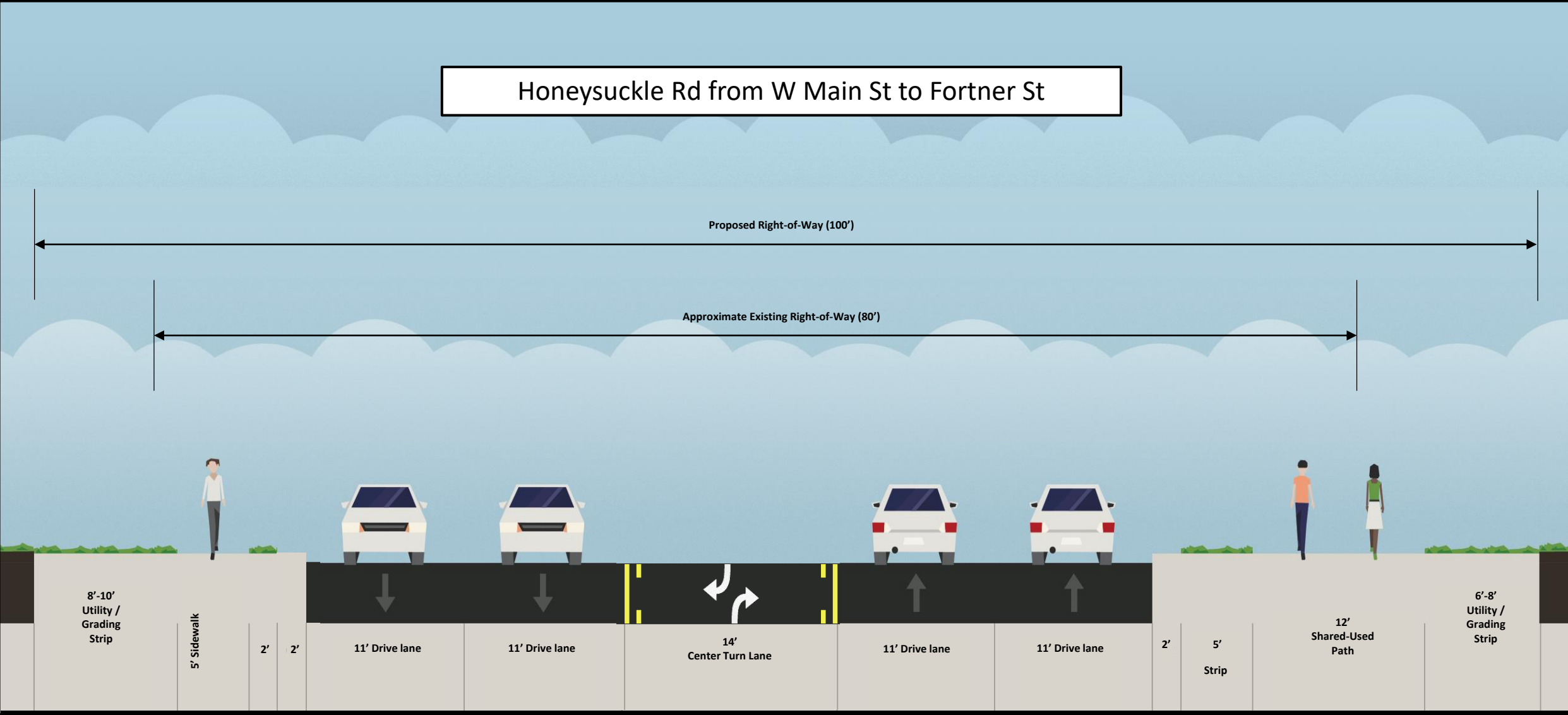
Five Lanes with Bike Lanes & Sidewalks

Honeysuckle Rd from W Main St to Fortner St

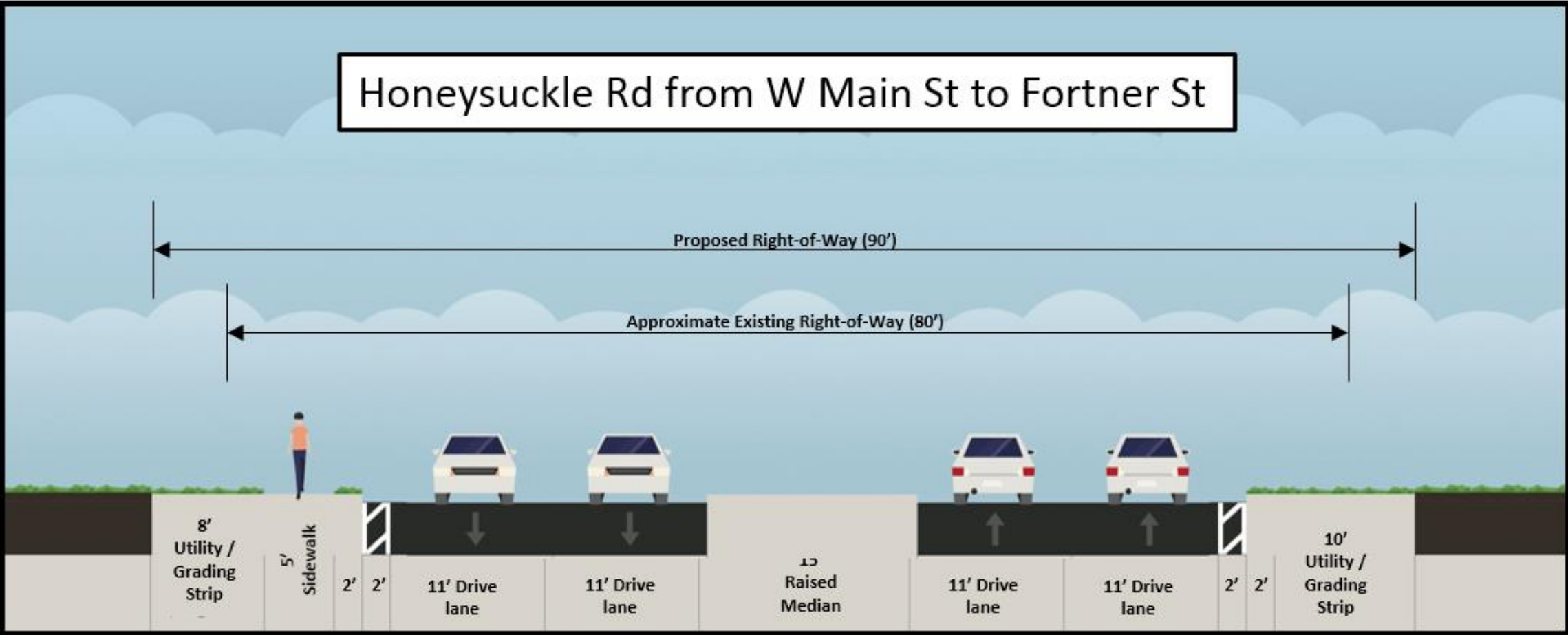


Five Lanes with Sidewalk & Shared-Use Path

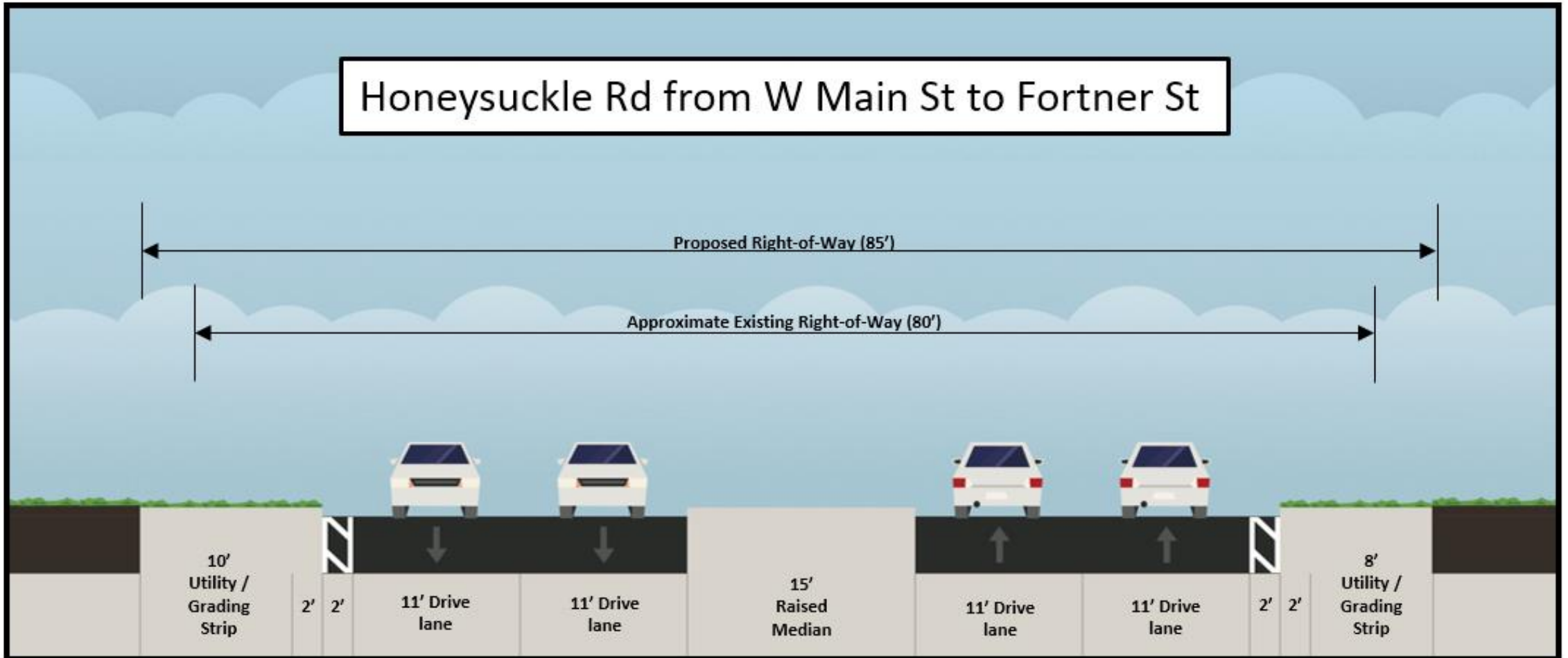
Honeysuckle Rd from W Main St to Fortner St



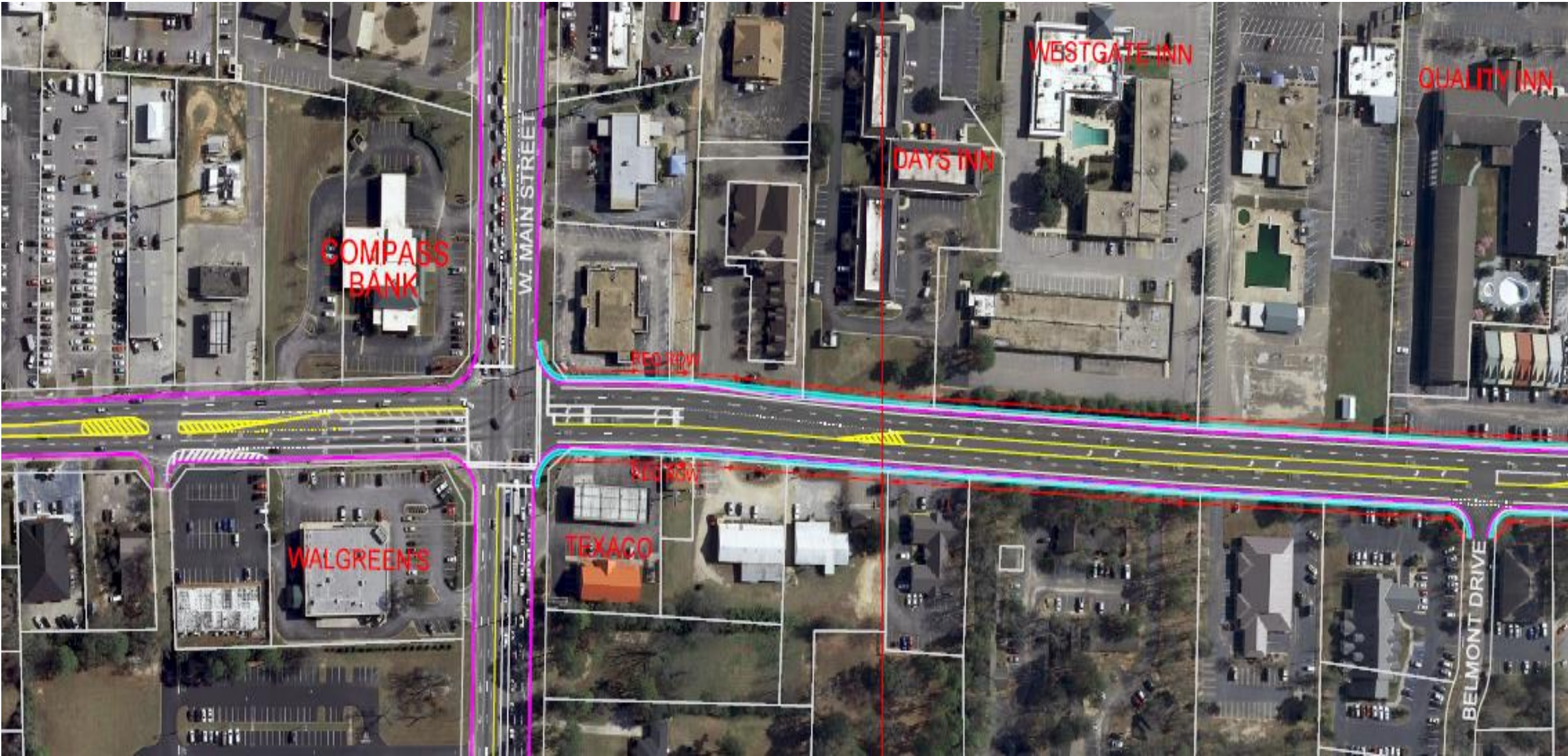
Five Lanes with Sidewalk on One Side



Five Lanes with No Bike Lanes or Sidewalks



Five Lanes with Bike Lanes & Sidewalks



Five Lanes with Bike Lanes & Sidewalks



Option 1

Five Lanes with Bike Lanes & Sidewalks



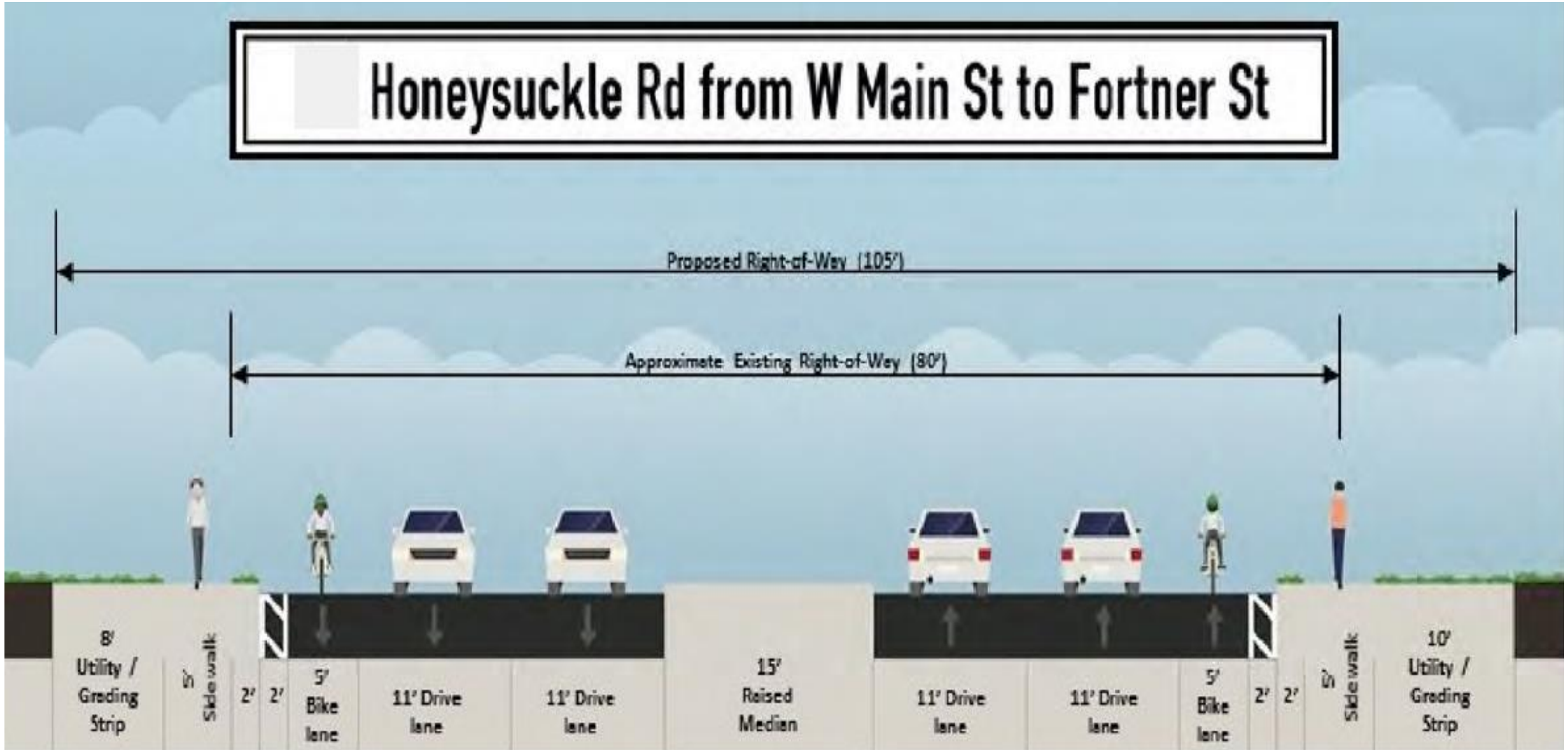
Option 1

Five Lanes with Bike Lanes & Sidewalks



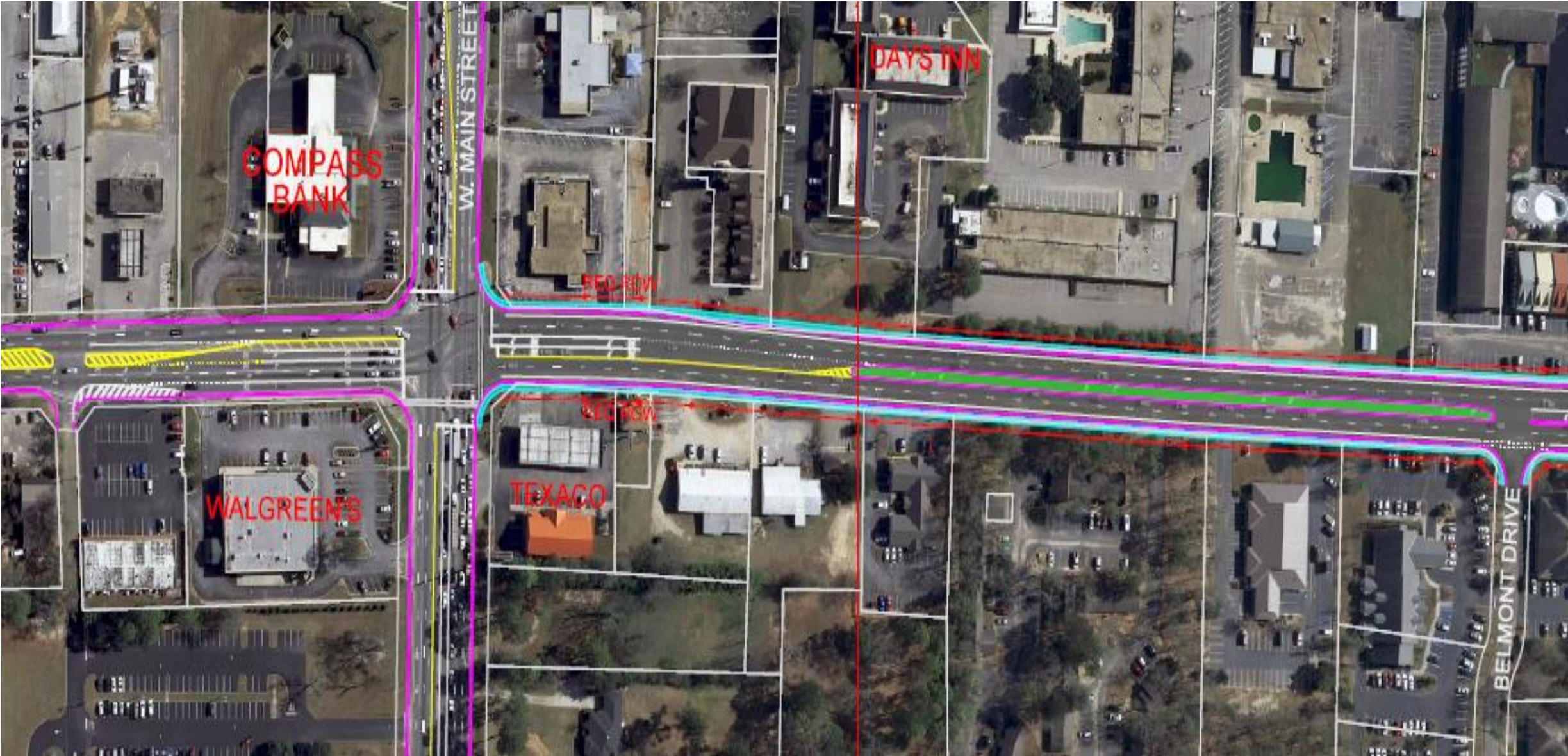
Option 1

Four Lane with Raised Median, Bike Lanes & Sidewalks



Option 1

Four Lane with Raised Median, Bike Lanes & Sidewalks



Option 2

Four Lane with Raised Median, Bike Lanes & Sidewalks



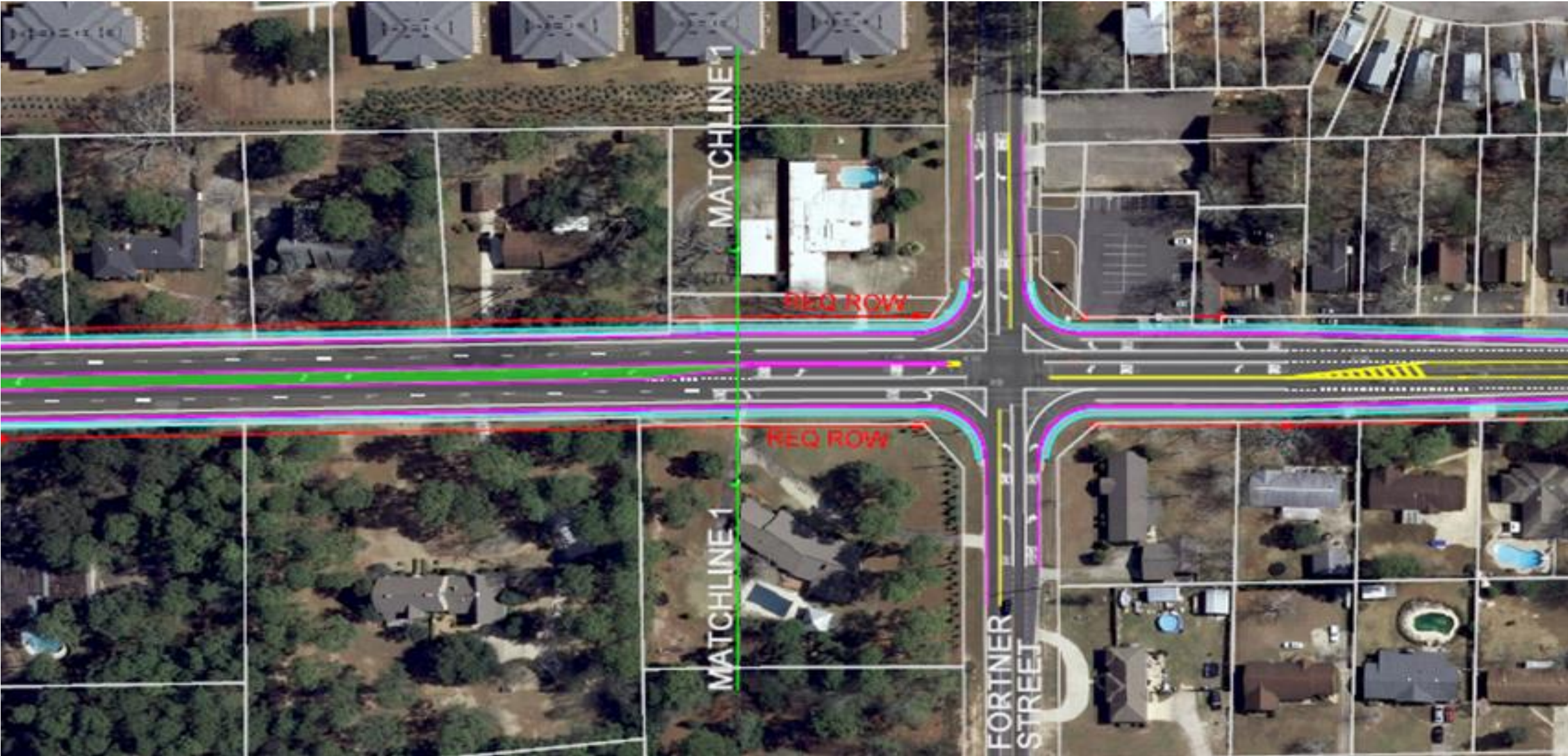
Option 2

Four Lane with Raised Median, Bike Lanes & Sidewalks



Option 2

Four Lane with Raised Median, Bike Lanes & Sidewalks



Option 2

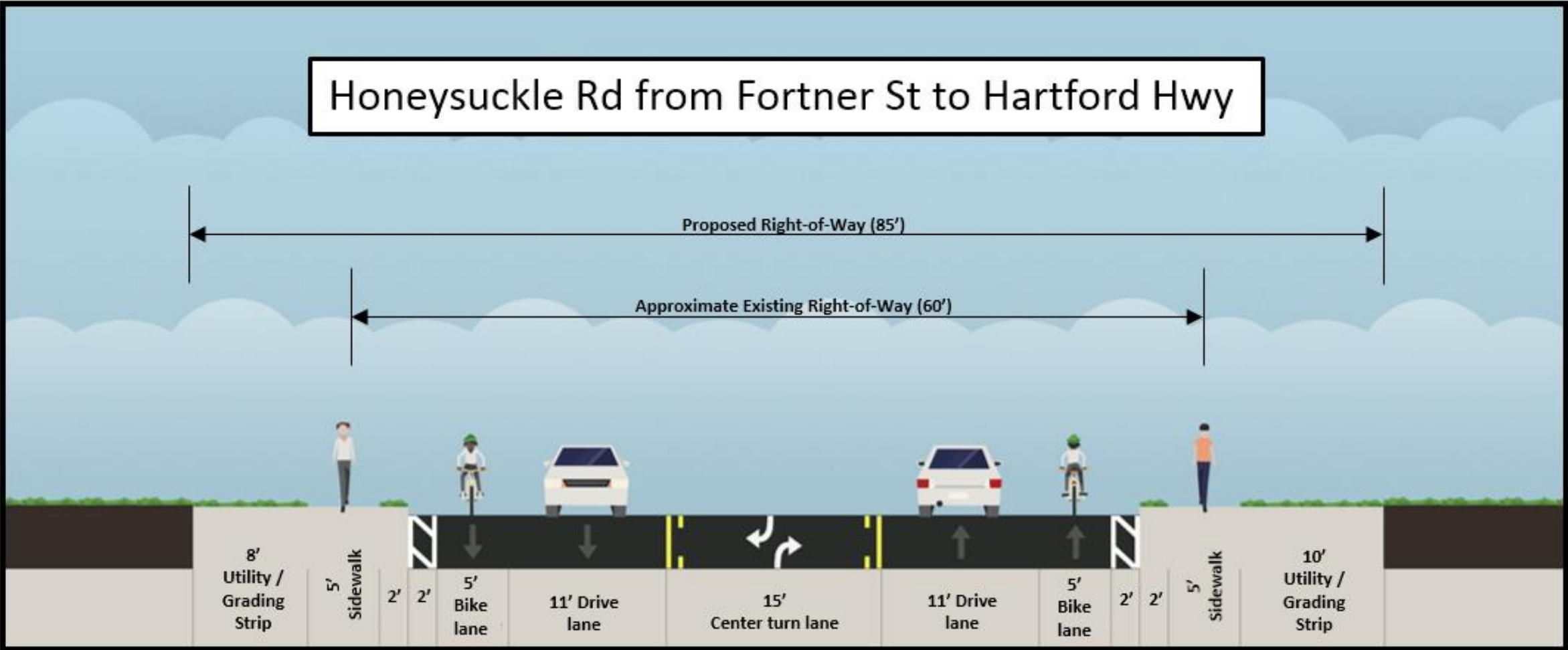
Improvement Alternatives

Segment 2

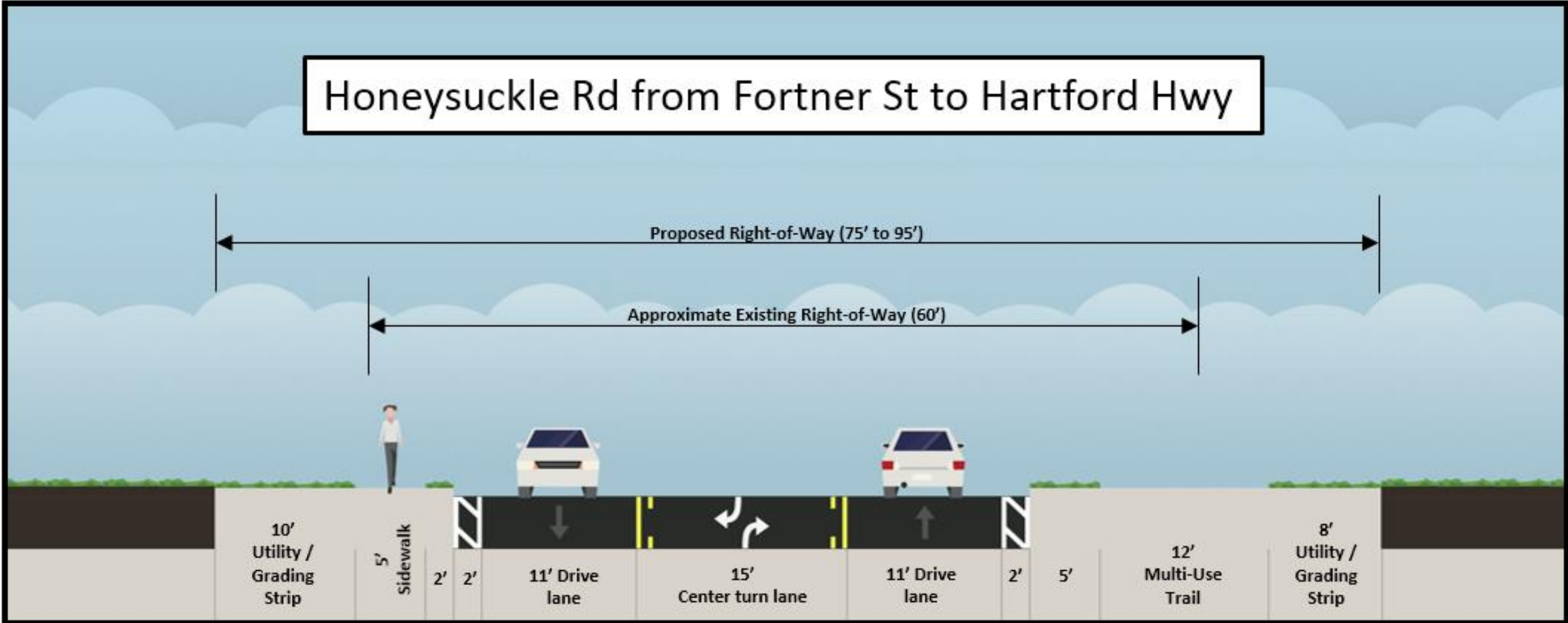
Fortner St. to Hartford Hwy. (AL
Hwy 52)

Widened Three-Lane Section with Bike Lanes & Sidewalks

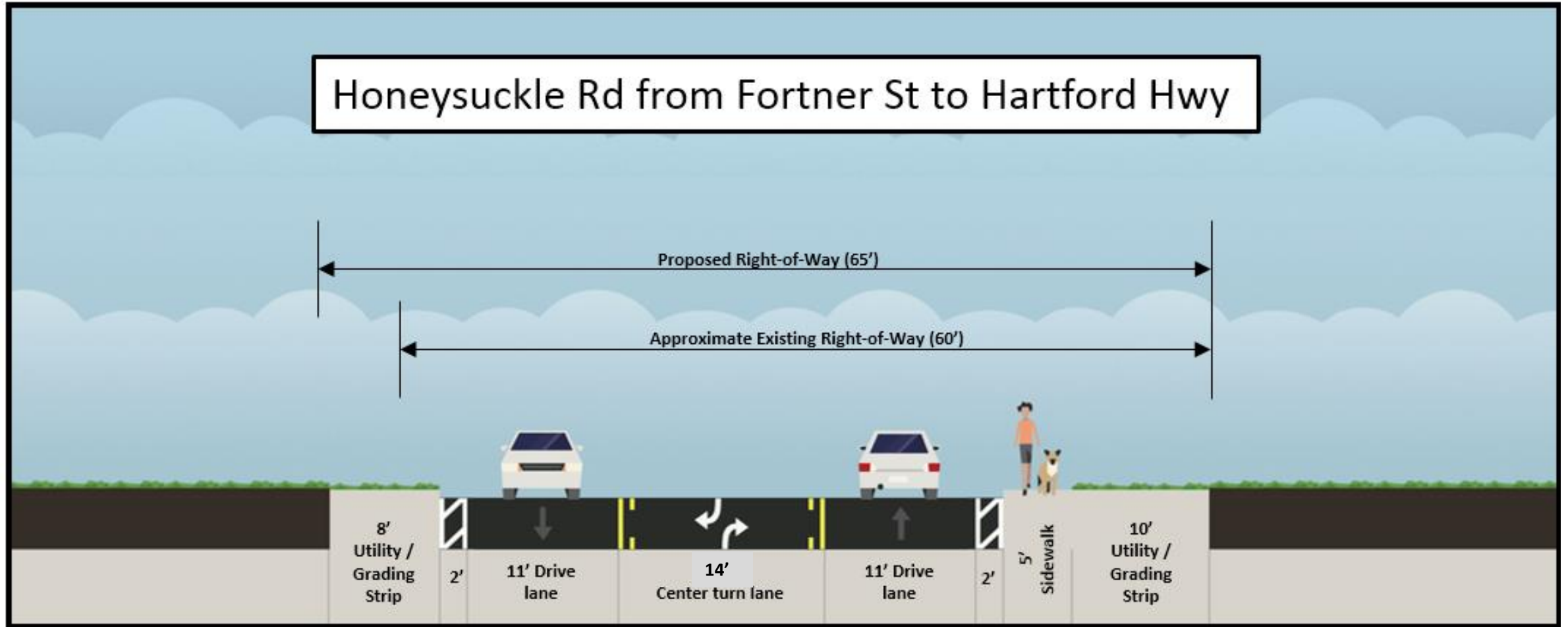
Honeysuckle Rd from Fortner St to Hartford Hwy



Widened Three-Lane Section with Sidewalk & Multi-Use Trail



Existing Three-Lane Section with Sidewalk on One Side



No Changes | Fortner Street to Hartford Highway



No Changes | Fortner Street to Hartford Highway



Connect Sidewalks
in front of
Honeysuckle
Middle School

No Changes | Fortner Street to Hartford Highway



Connect Sidewalks
in front of
Honeysuckle
Middle School

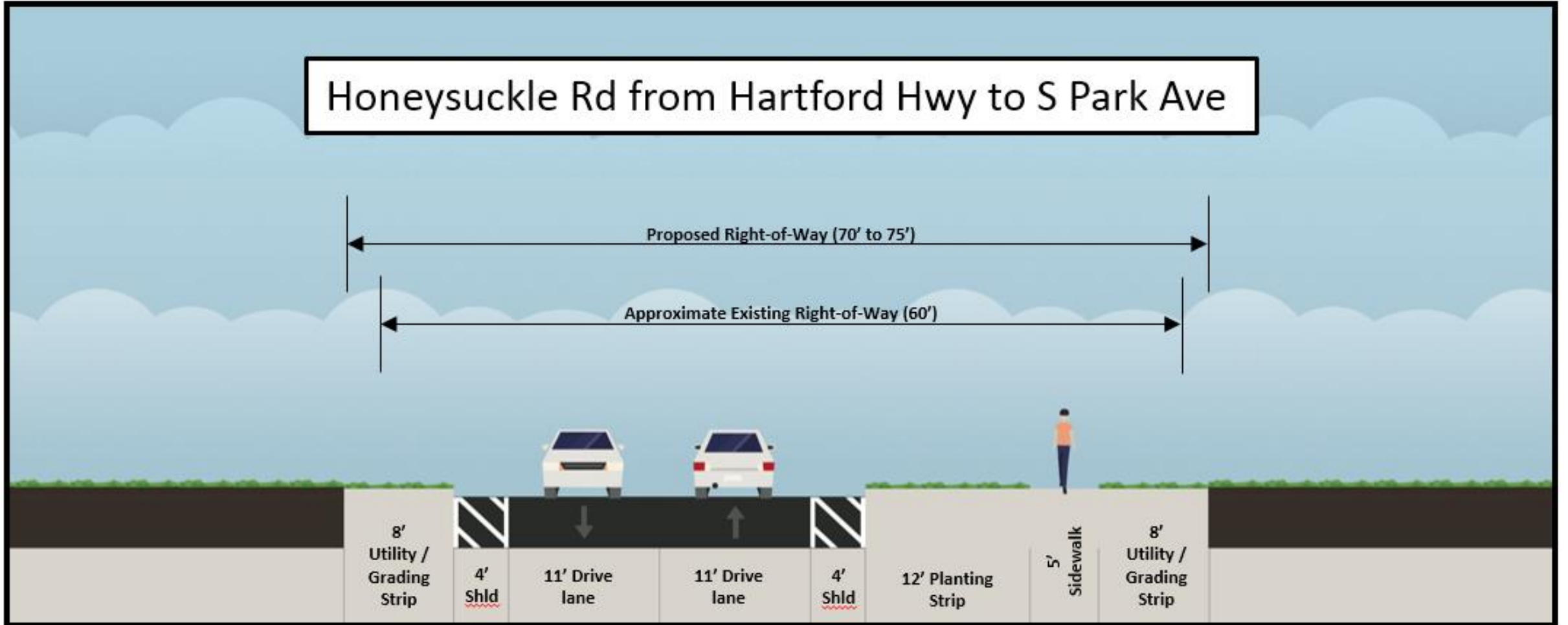
No Changes | Fortner Street to Hartford Highway



Improvement Alternatives
Segment 3
Hartford Hwy. (AL Hwy 52) to
South Park Avenue

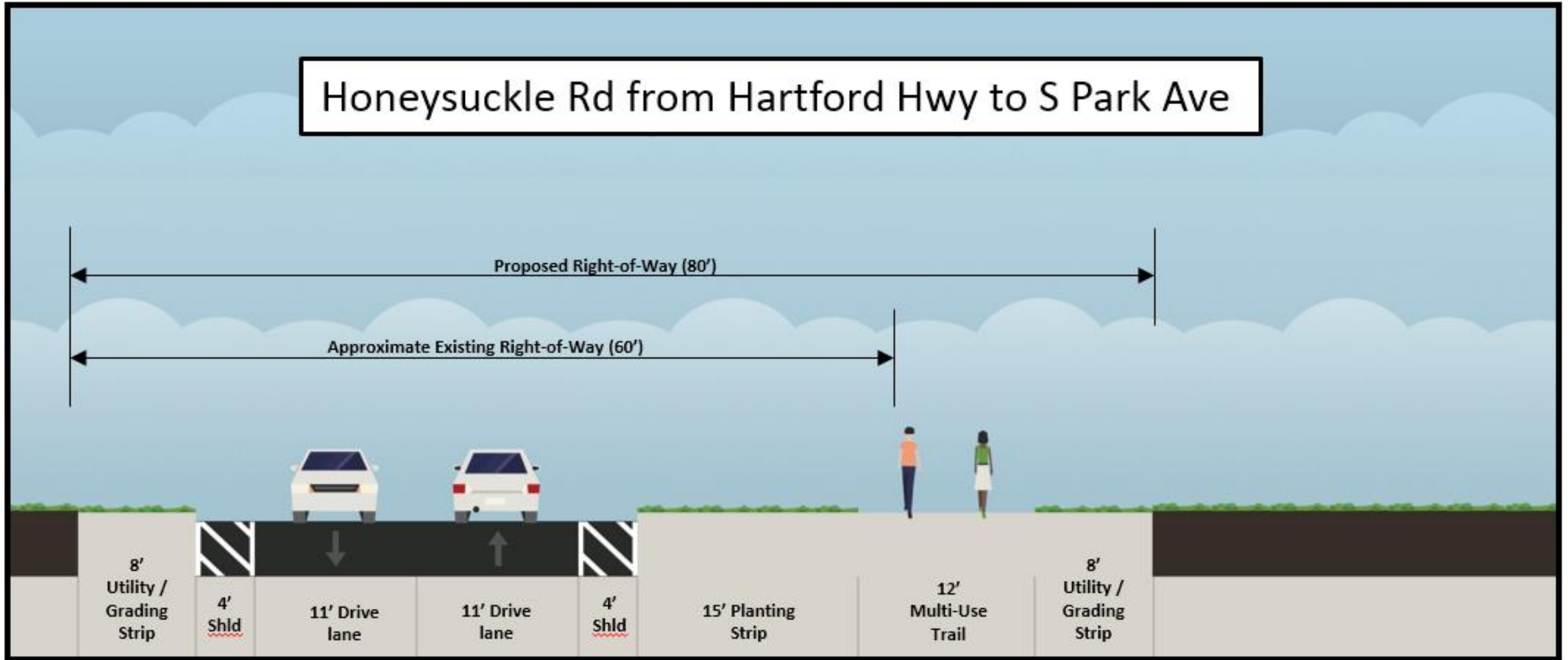
Existing Two-Lane Section with Sidewalk on One Side

Honeysuckle Rd from Hartford Hwy to S Park Ave



Existing Two-Lane Section with Multi-Use Trail

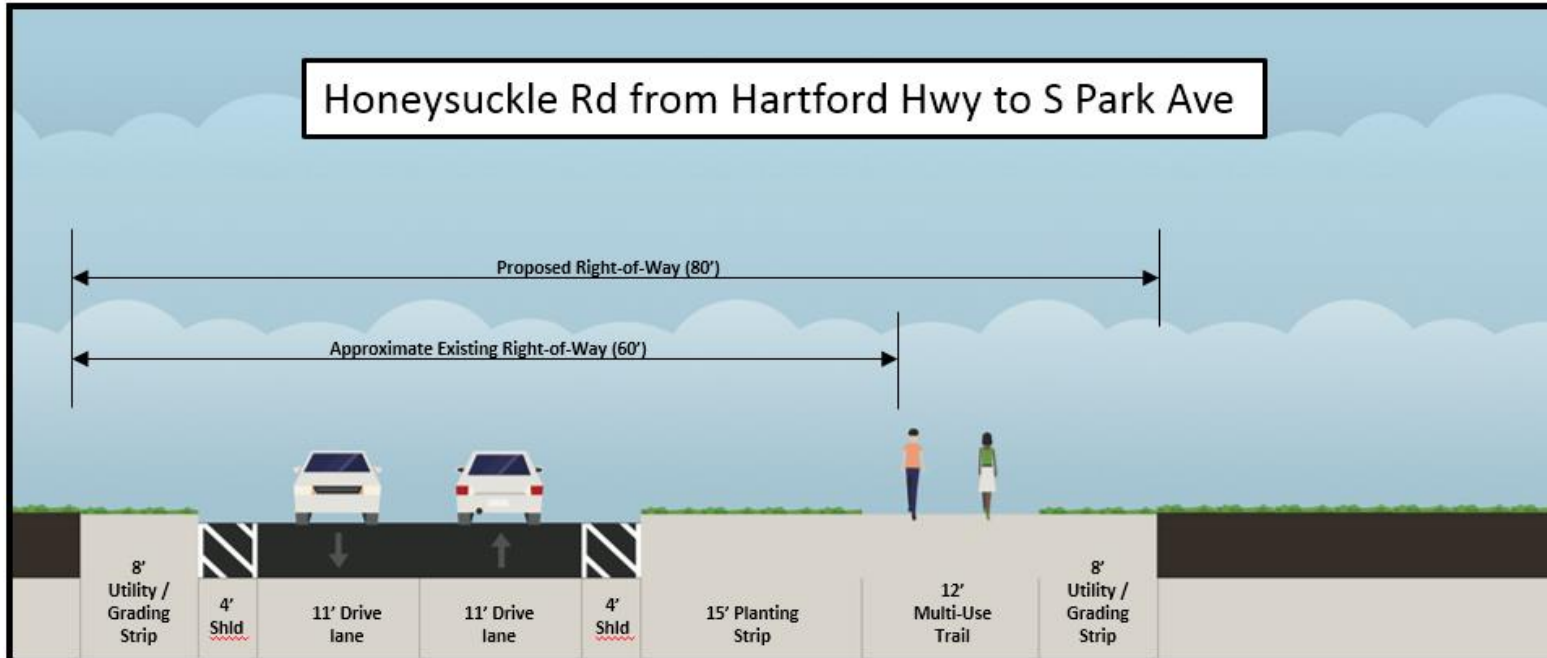
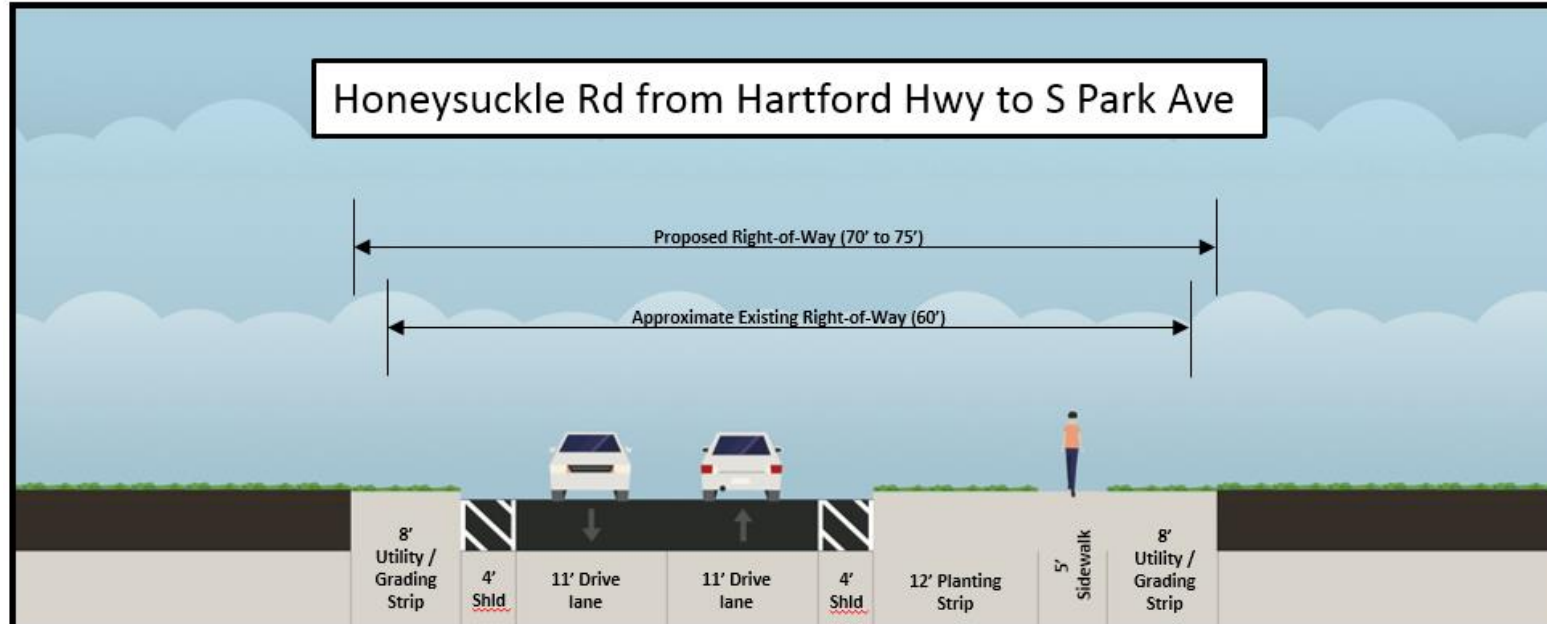
Honeysuckle Rd from Hartford Hwy to S Park Ave



Realignment of Honeysuckle Road

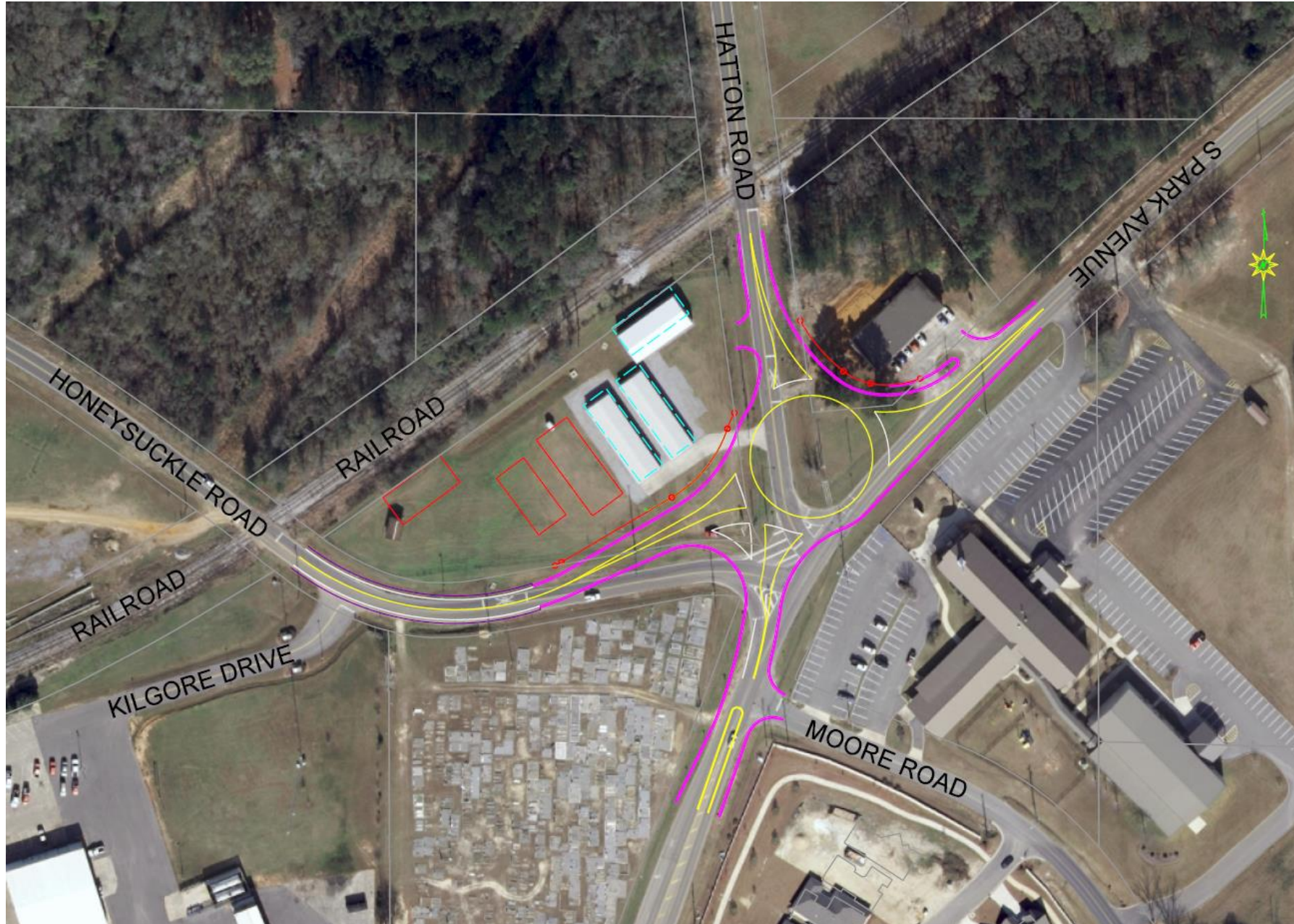


Realignment of Honeysuckle Road – Typical Section Options



Improvement Alternatives Honeysuckle Rd. at South Park. Ave./Hatton Rd./Moore Rd.

Honeysuckle Rd. at S. Park Ave./Hatton Rd./Moore Rd. Roundabout



- LOS A for AM & PM Peak hour thru 2037
- Safer than existing intersections
- Don't touch cemetery
- Limit impacts to Church
- Impacts to business on north side
- Look at smaller/compact design

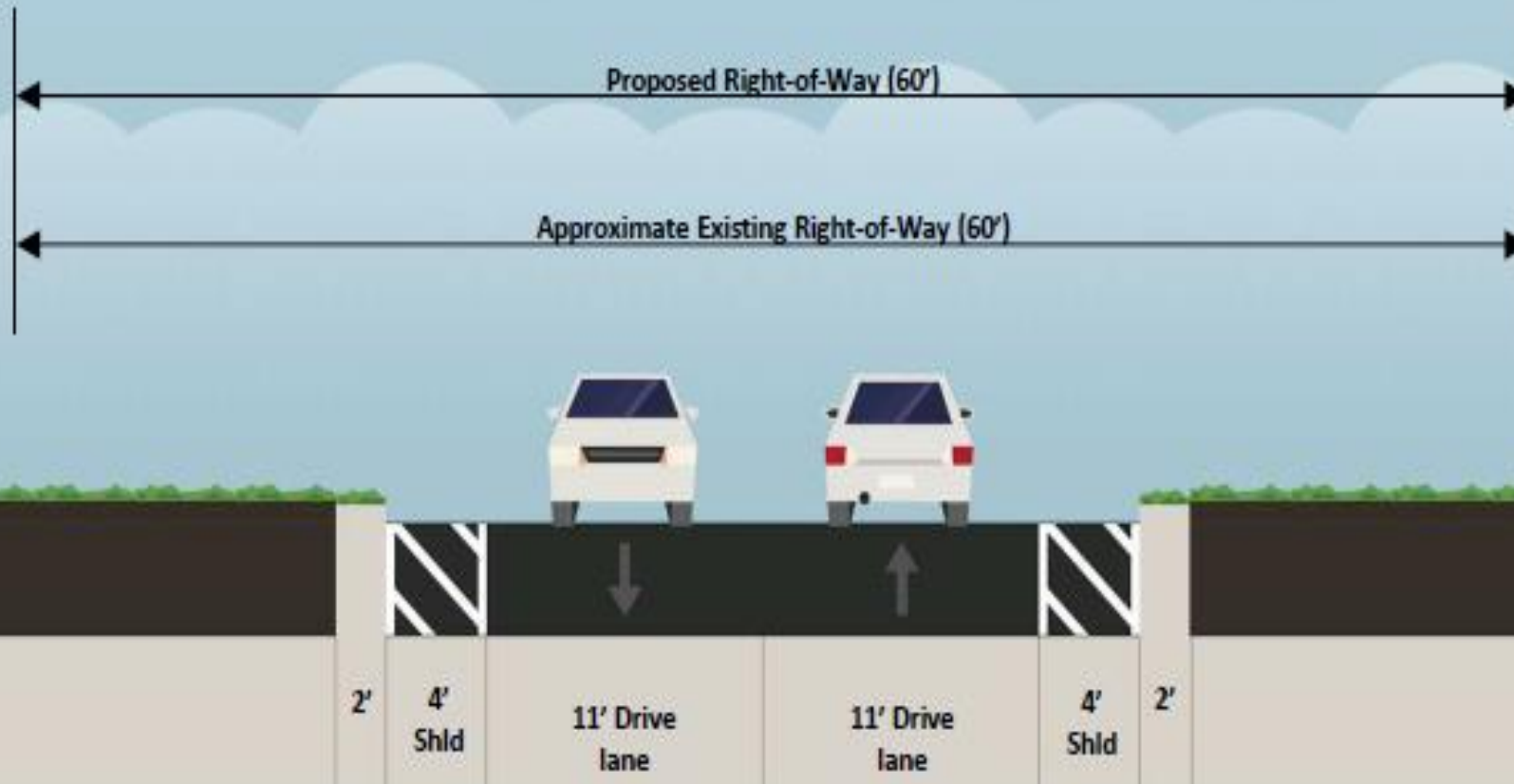
Honeysuckle Road Extension S. Park Ave. to Campbellton Hwy.

Extension of Honeysuckle Road

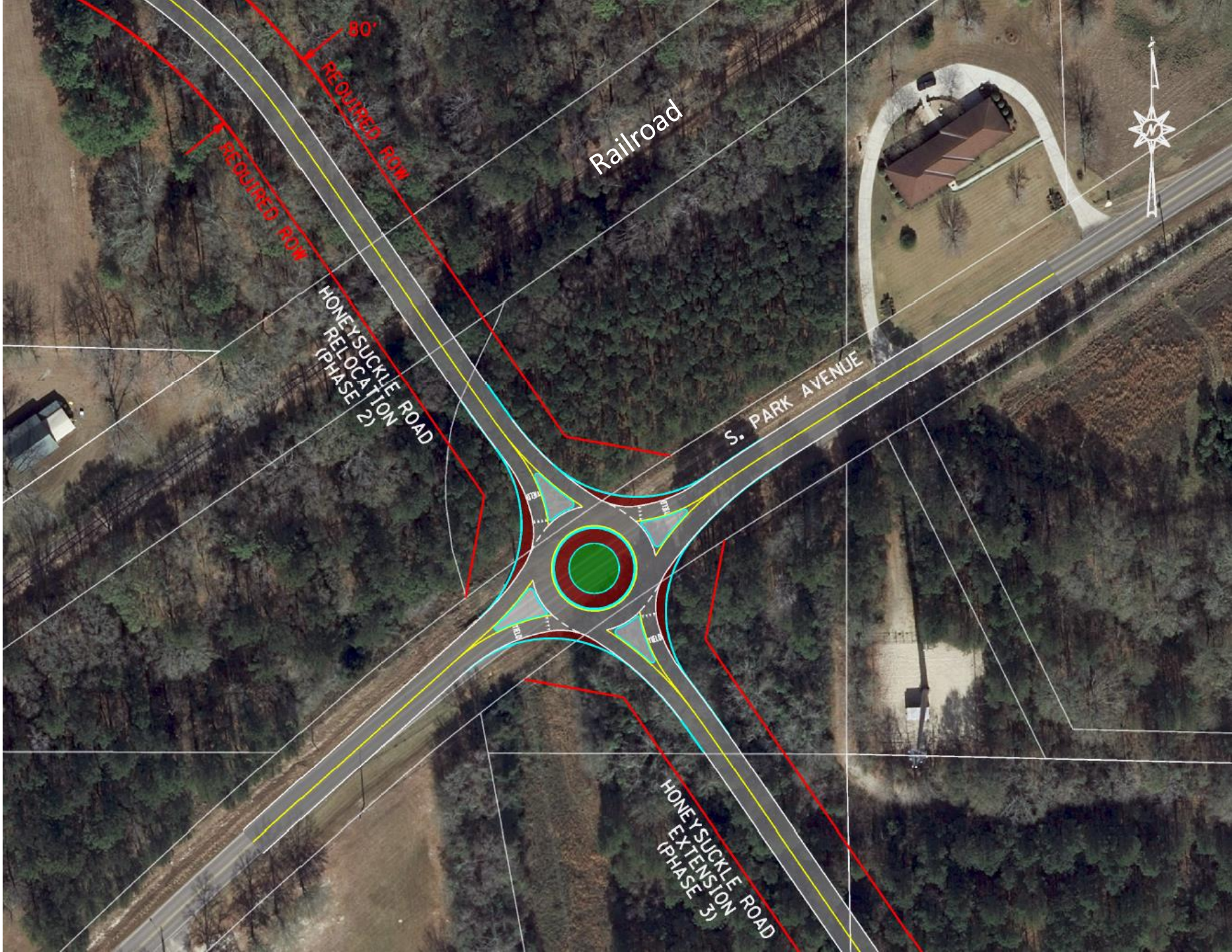


Extension of Honeysuckle Road

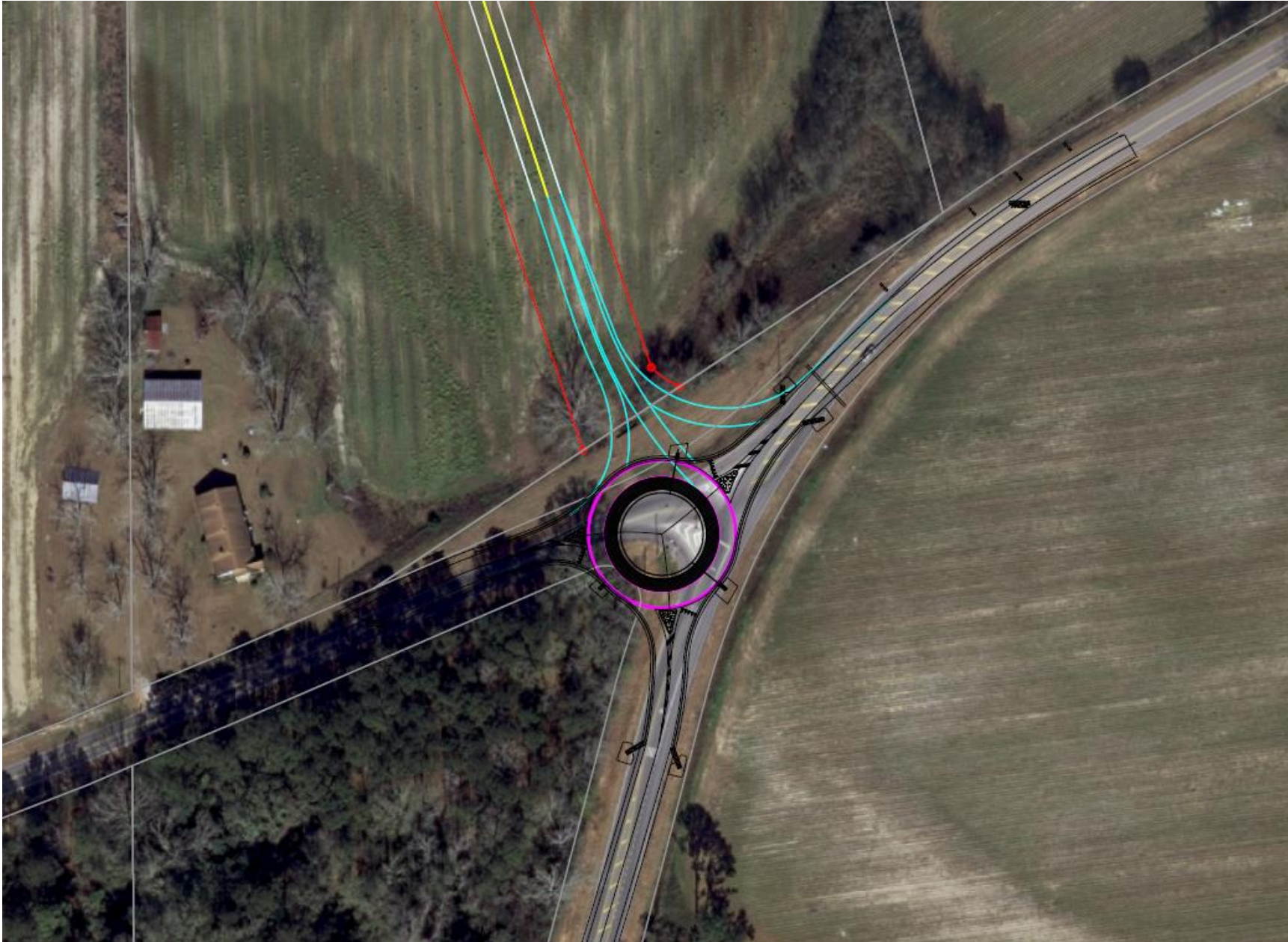
Honeysuckle Rd from S Park Ave to Campbellton Hwy / Taylor Rd Intersection



Honeysuckle Rd. at S. Park Ave. Roundabout



Campbellton Hwy. at Taylor. Rd. Roundabout



- Houston County roundabout project
- Honeysuckle Rd. extension will be fourth leg
- LOS A in AM & PM Peak hour thru 2037

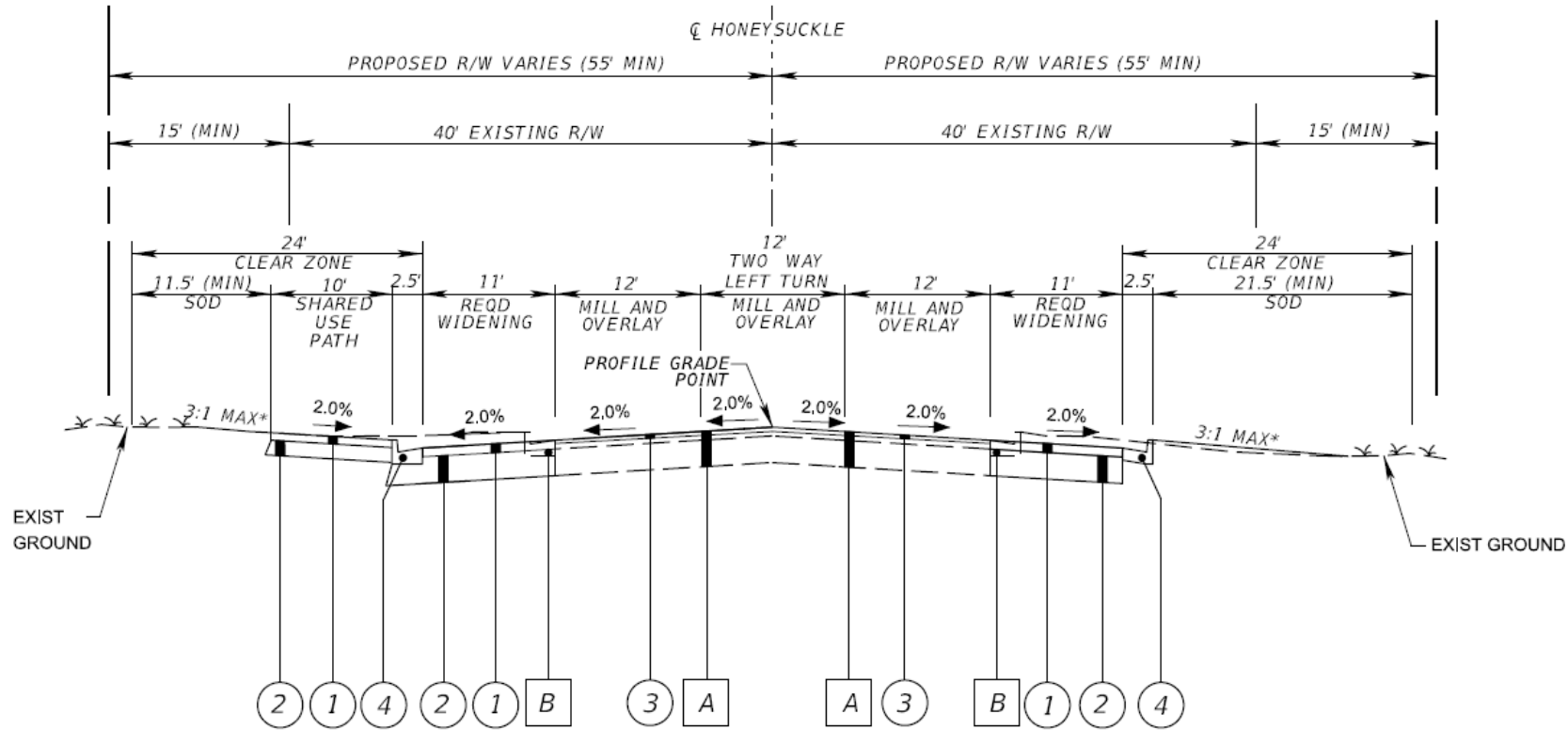
Honeysuckle Road Improvements

Phase 1

Widening from Fortner Street to W. Main St.
(US-84)

Honeysuckle Road Improvements – Phase 1

- Widen existing 3-lane to 5-lane section
- Shared-use path on west side



Honeysuckle Road Improvements – Phase 1

Design Challenges



- Minimize property impacts
- Driveway tie-ins
- Stormwater management
- Utility coordination & relocation

Honeysuckle Road Improvements – Phase 1 Design Challenges

- Impacts to private detention ponds
- Beaver Creek bridge culvert extension
 - FEMA flood study
 - Environmental due-diligence & permitting



Honeysuckle Road Improvements

Phase 2 & 3

Relocation North of S. Park Ave. & Extension
from S. Park Ave. to Campbellton Hwy.



PROJECT TO TIE TO EXISTING HONEYSUCKLE ROAD AT HOMESTEAD ROAD

HONEYSUCKLE ROAD REALIGNMENT

EXISTING ROADWAY AND RAILROAD CROSSING TO BE REMOVED

PROPOSED CUL-DE-SAC

REQUIRED 100' RIGHT-OF-WAY

EXISTING ROADWAY TO BE REMOVED

PROPOSED CUL-DE-SAC

HONEYSUCKLE ROAD EXTENSION

EXTENSION TO CONNECT TO PROPOSED ROUNDABOUT BY HOUSTON COUNTY

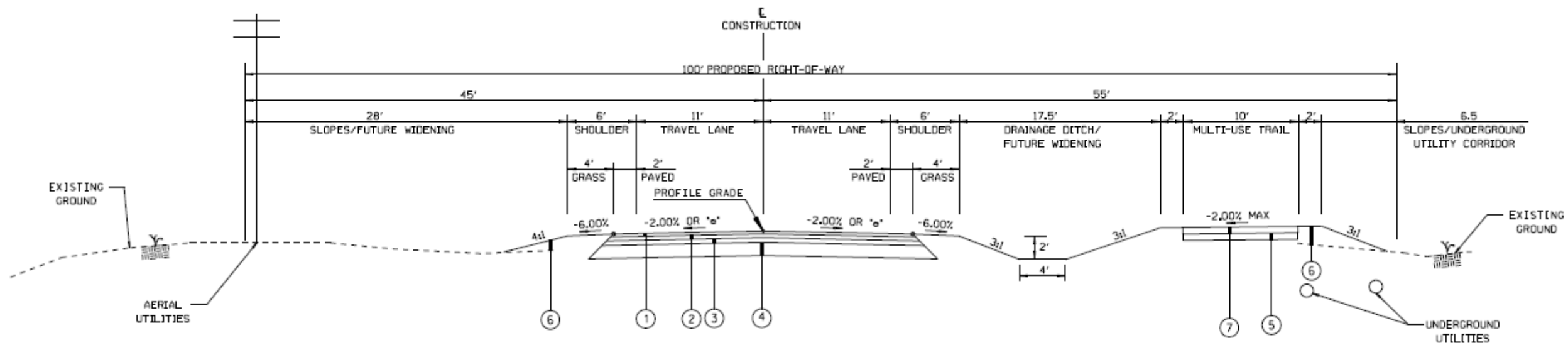
NO.	REVISIONS DESCRIPTION	BY	DATE

SAIN
associates
ENGINEERING ARCHITECTURE

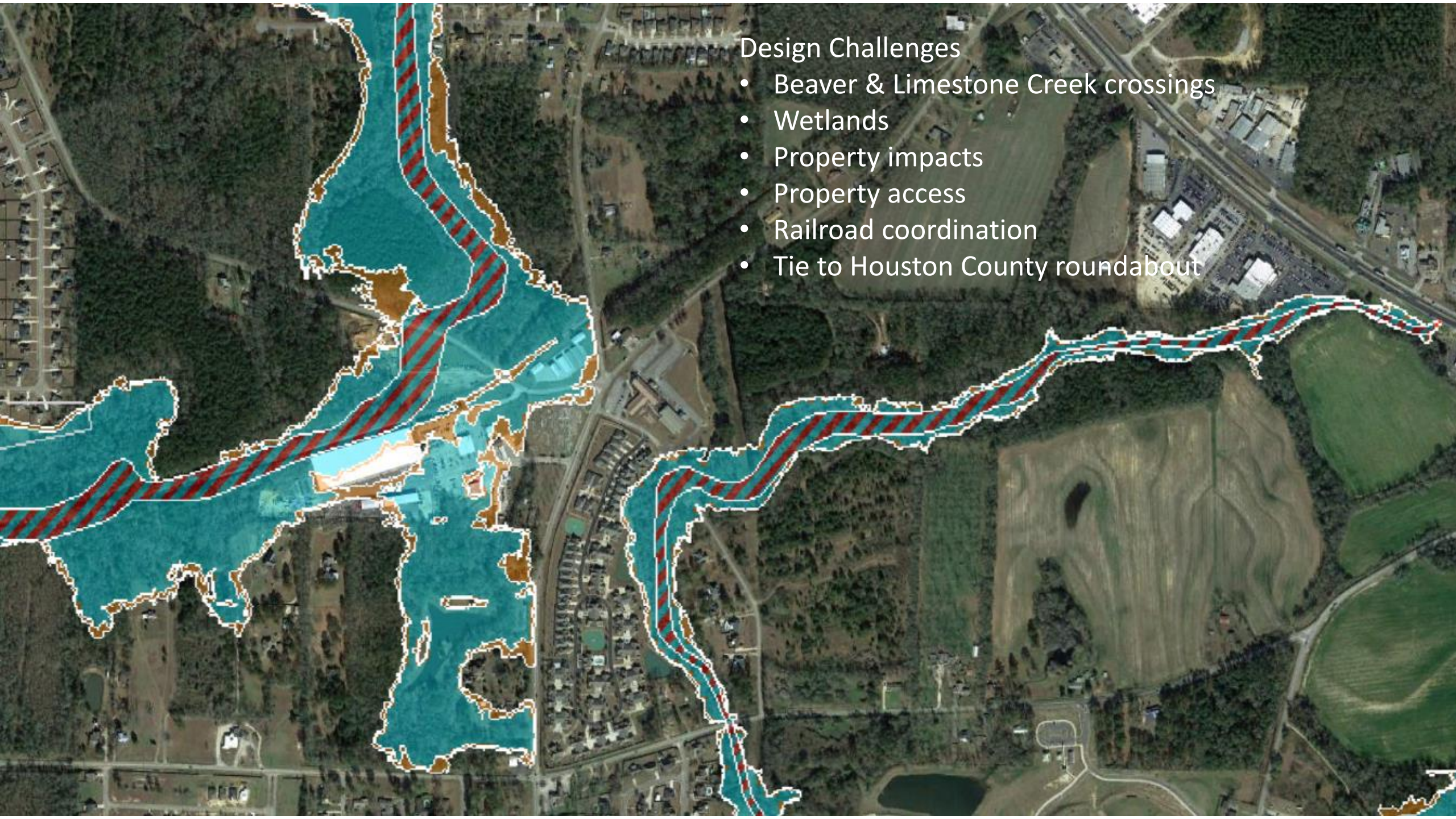
Two Piedmont Park South
Suite 500 East
Birmingham, Alabama 35243
Phone: (205) 940-6420
Website: www.sain.com

DRAWING NAME
PRELIMINARY LAYOUT
**HONEYSUCKLE ROAD
EXTENSION**
FOR
CITY OF DOTHAN
DOTHAN, AL

DRW. BY SRH	JOB NO. 18-0112
CHK. BY AB	SCALE 1" = 250'
PROJ. MGR. NC	DATE 02-11-19
SHEET NO. 1 of 1	



HONEYSUCKLE ROAD
 PROPOSED 2-LANE SECTION
 WITH MULTI-USE TRAIL



Design Challenges

- Beaver & Limestone Creek crossings
- Wetlands
- Property impacts
- Property access
- Railroad coordination
- Tie to Houston County roundabout

Questions?

Blair Perry, P.E.

Gresham Smith

Principal Engineer / Alabama State Transportation Leader

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