

Blue Lake Drive/Cahaba Heights Road and Sicard Hollow Road



SAIN
ASSOCIATES

CELEBRATING 50 YEARS



VESTAVIA HILLS

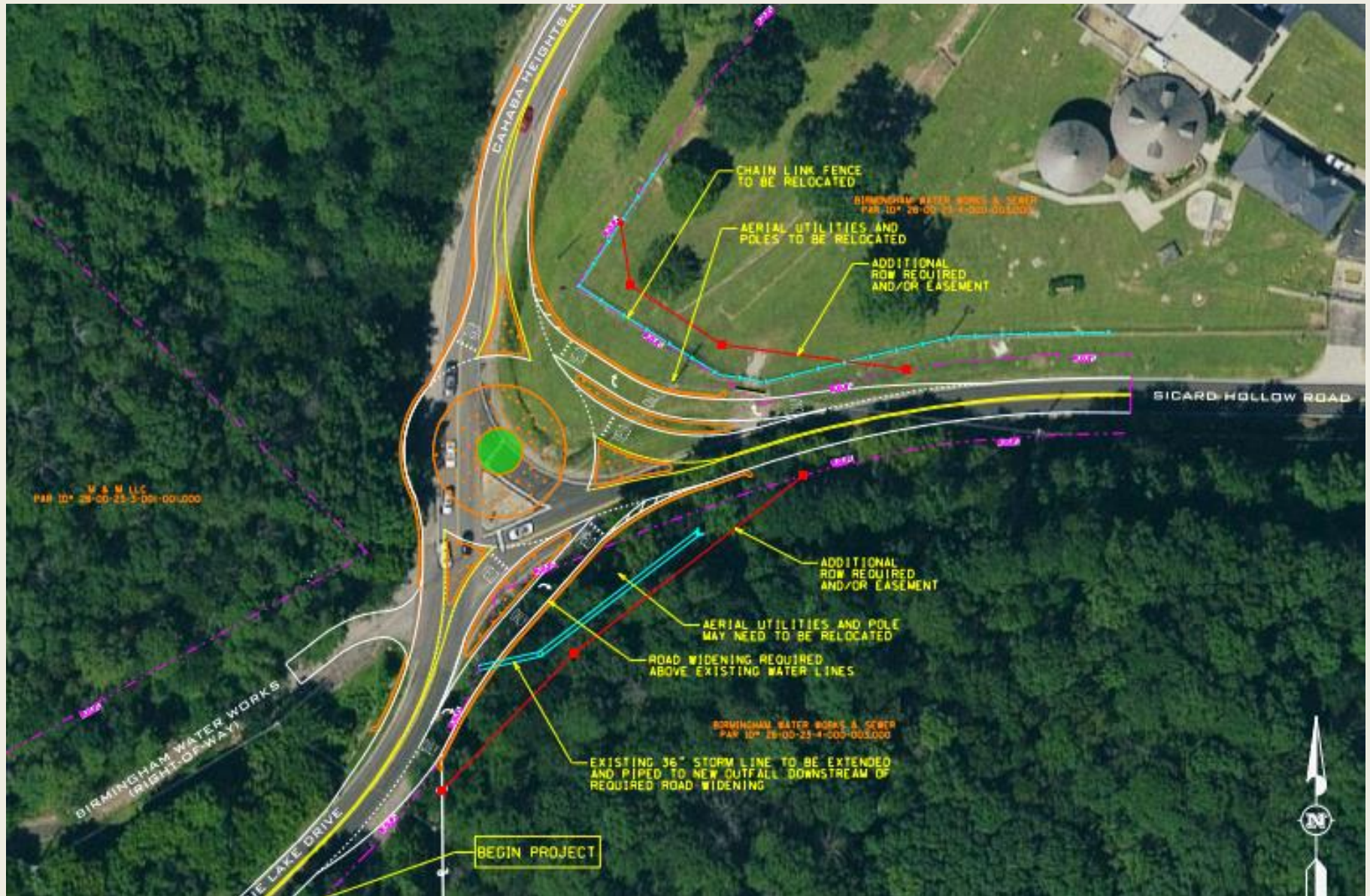
City Council Meeting
May 23, 2022

What's Been Done?

- APPLE Study
 - Two alternatives evaluated
- Survey (topographic and right-of-way)
- Utility coordination
- Updated traffic forecast & analysis
- Refined roundabout concept



Recommended Alternative



The Issues



- Geometric
 - Skewed angle
 - Intersection sight distance
 - Stopping sight distance
- Operations
 - Travel speeds too high for geometry
 - Queuing and travel delays in peak hours
 - Side-street stop control no longer sufficient

The Issues

- Crash Types
 - Curve/speed related
 - Failure to yield
 - Rear-end
 - Side-swipe
- Traffic Volumes
 - Area growth
 - The Bray at Liberty Park
- Road network
 - Two-lane roads limit capacity
 - Widening potential is poor



Traffic Signal vs. Roundabout

Evaluation Criteria	Install Traffic Signal & Turn Lanes	Roundabout
Acceptable Operations with Forecasted Traffic	No	Yes
Calms Traffic Speeds	No	Yes
Addresses sight distance deficiencies	Partially	Yes
Reduces crash frequency & severity	No	Yes
Cost effective	No	Yes



Traffic Signalization Constraints



Performance Metrics for Roundabouts

- Convert a side-street stop intersection to roundabout:
 - ✓ 44% reduction in all crashes
 - ✓ 90% reduction in serious injury & fatal crashes
- Safer than traffic signals
- Moves traffic efficiently
- Public acceptance after installation is high
- Lower life-cycle costs



Case Study:

SR 334 @ Miser Station Road Blount County, TN

Before



SR-334 (Looking North)



SR-334 (Looking South)

After



3-Year Period	Crashes
Before (Actual)	21
Before (Expected)	15
After (Actual)	7
Crash reduction ratio	0.47



Case Study:

SR 160 @ SR 79
Cleveland, AL



Case Study:

N. College Street @ Farmville Road
Auburn, AL



Case Study:

Redland Road @ Firetower Road
Wetumpka, AL



Public Education Options

- Public meeting
- Informational brochure
- Informational videos
- Media announcements

