

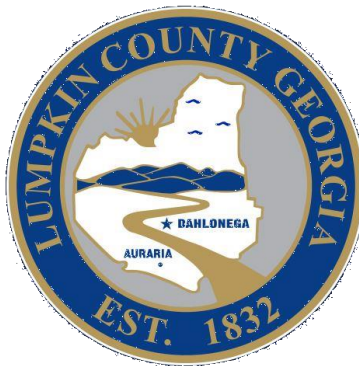


SR 400 Extension Planning Study

PI # 0013671

Stakeholder Meeting #3

August 25, 2020



Jalen Ford – GDOT PM
Garth Lynch, PE, AICP – HNTB PM

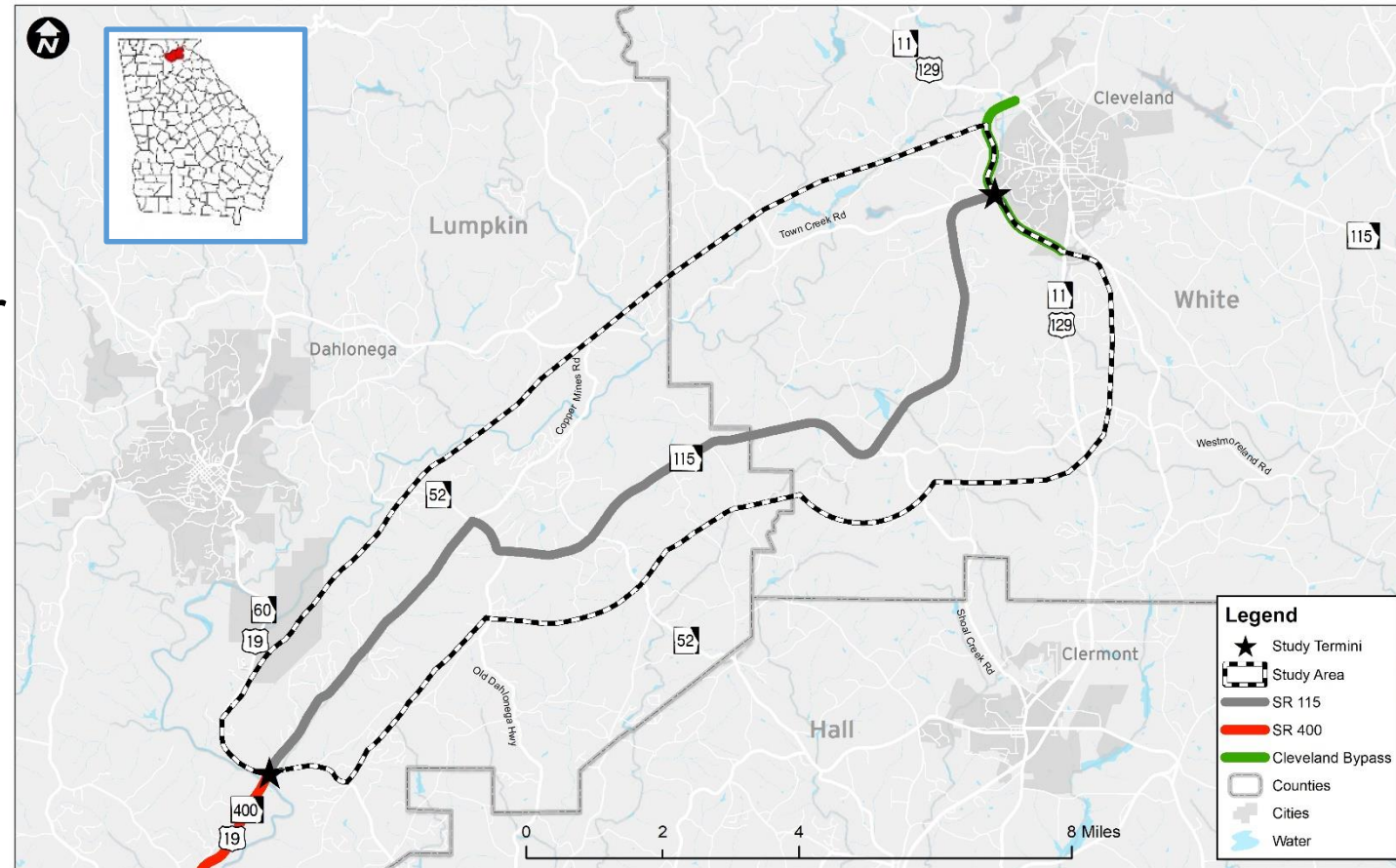
Agenda

- Study Background
- Future No-Build Conditions
- Development of Potential Improvements
 - Capacity Improvements
 - Intersection Improvements
- Next Steps

Study Background

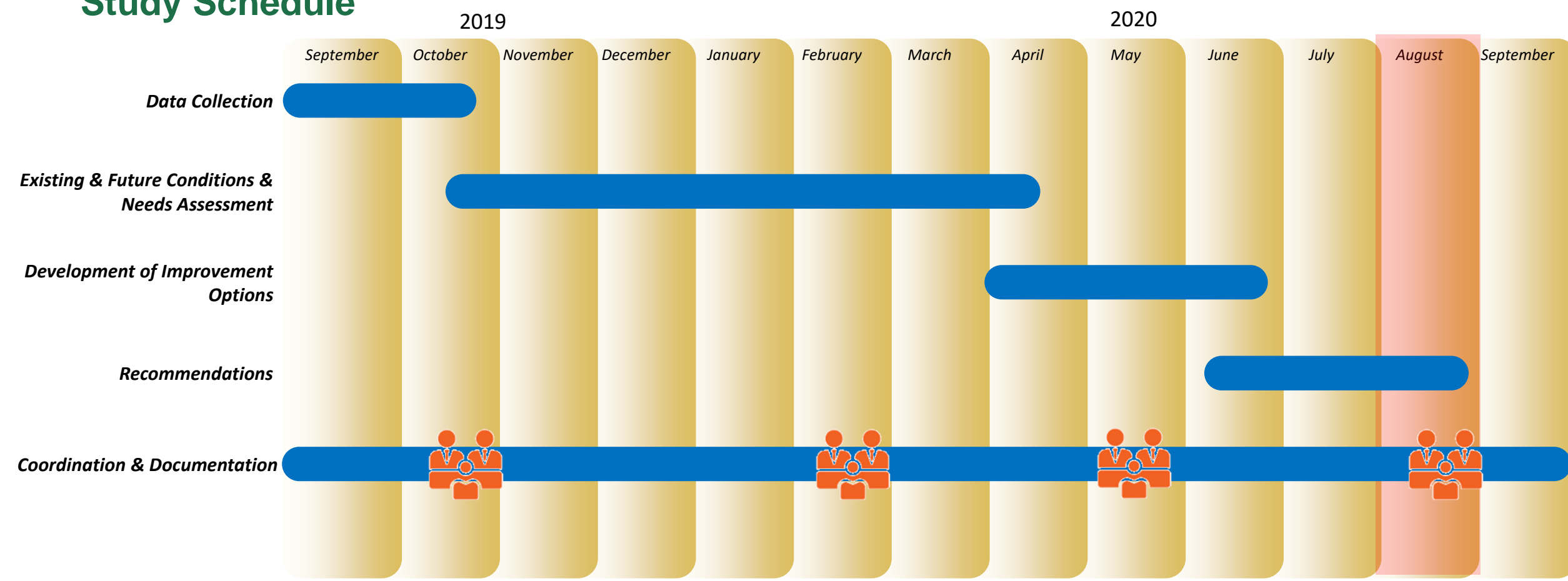
Study Purpose

- Raised as need to GDOT Executive Management in April 2019 by locals
- Identify transportation needs for the study area (SR 400/SR 60 to SR 115/Cleveland Bypass)
 - Connectivity
 - Safety
 - Operations
 - Capacity
 - Economic Development



Study Background

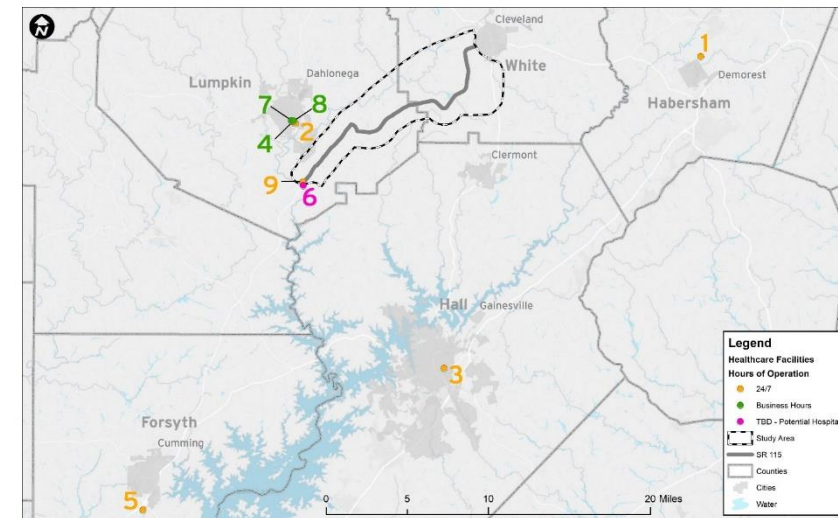
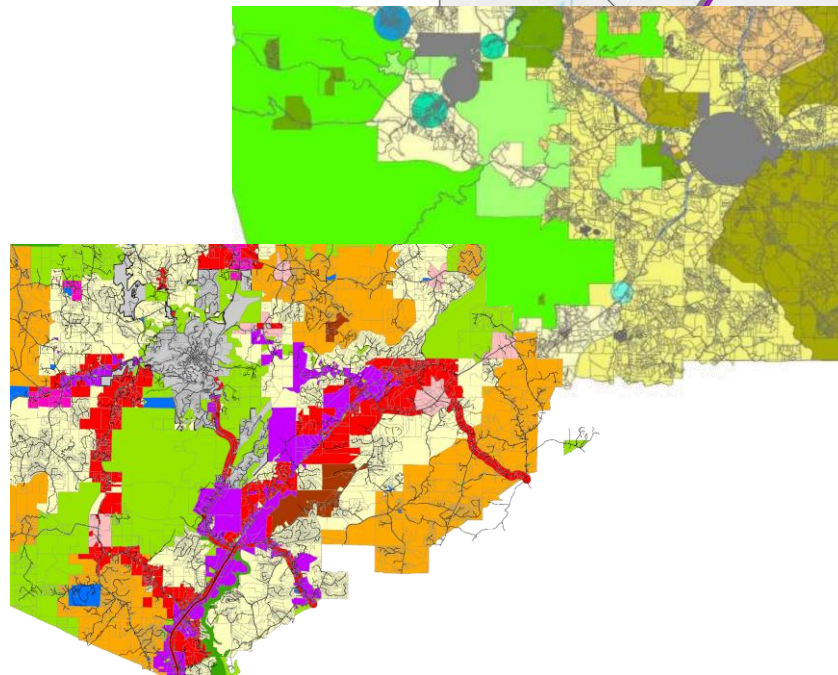
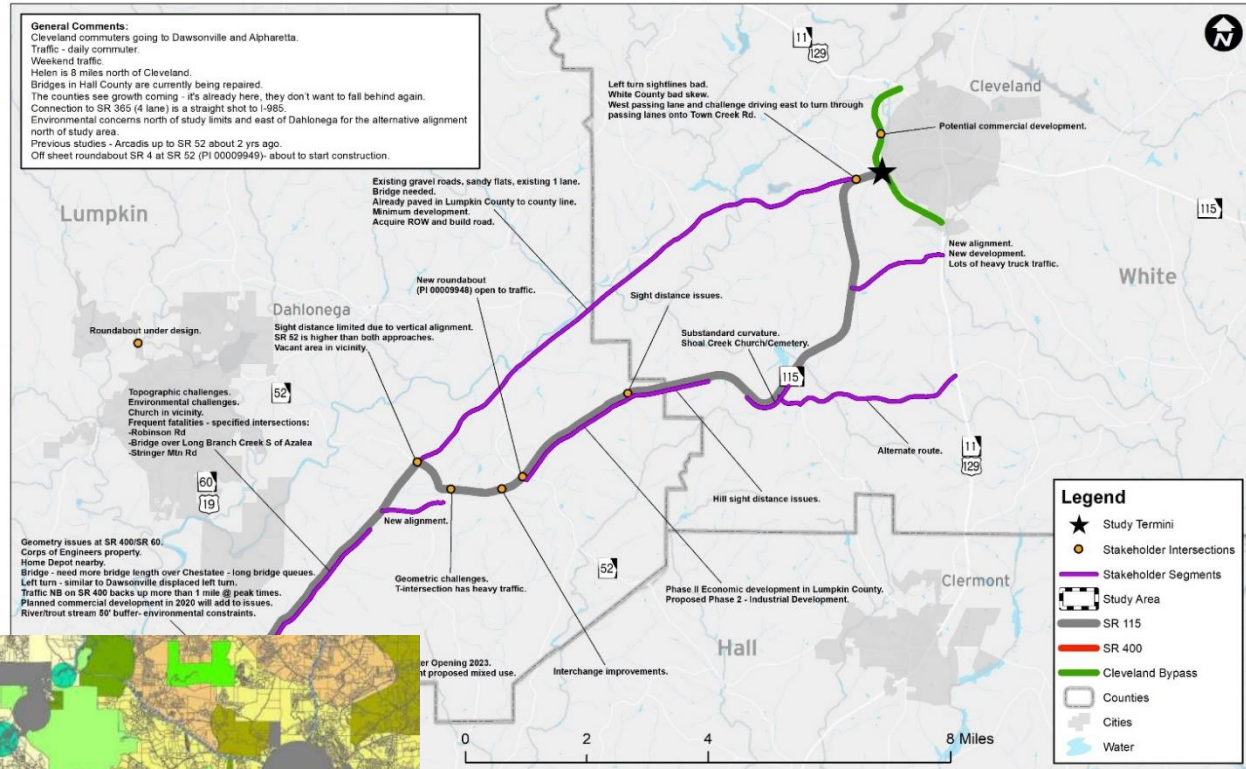
Study Schedule



Study Background

What We've Heard

- Sight Distance / Potential Safety Concerns
- Geometric Concerns
- Weekend Traffic
- Traffic Growth



Future Conditions

Growth Rate

| Location | Historical Annual Growth (1990-2020) | Forecasted Annual Growth (2020-2050) | PI# 0010195 No-Build Growth Rate |
|----------------|--------------------------------------|--------------------------------------|----------------------------------|
| Georgia | 1.68% | 0.90% | - |
| Lumpkin County | 2.84% | 1.08% | - |
| White County | 3.02% | 1.44% | 2.20% |

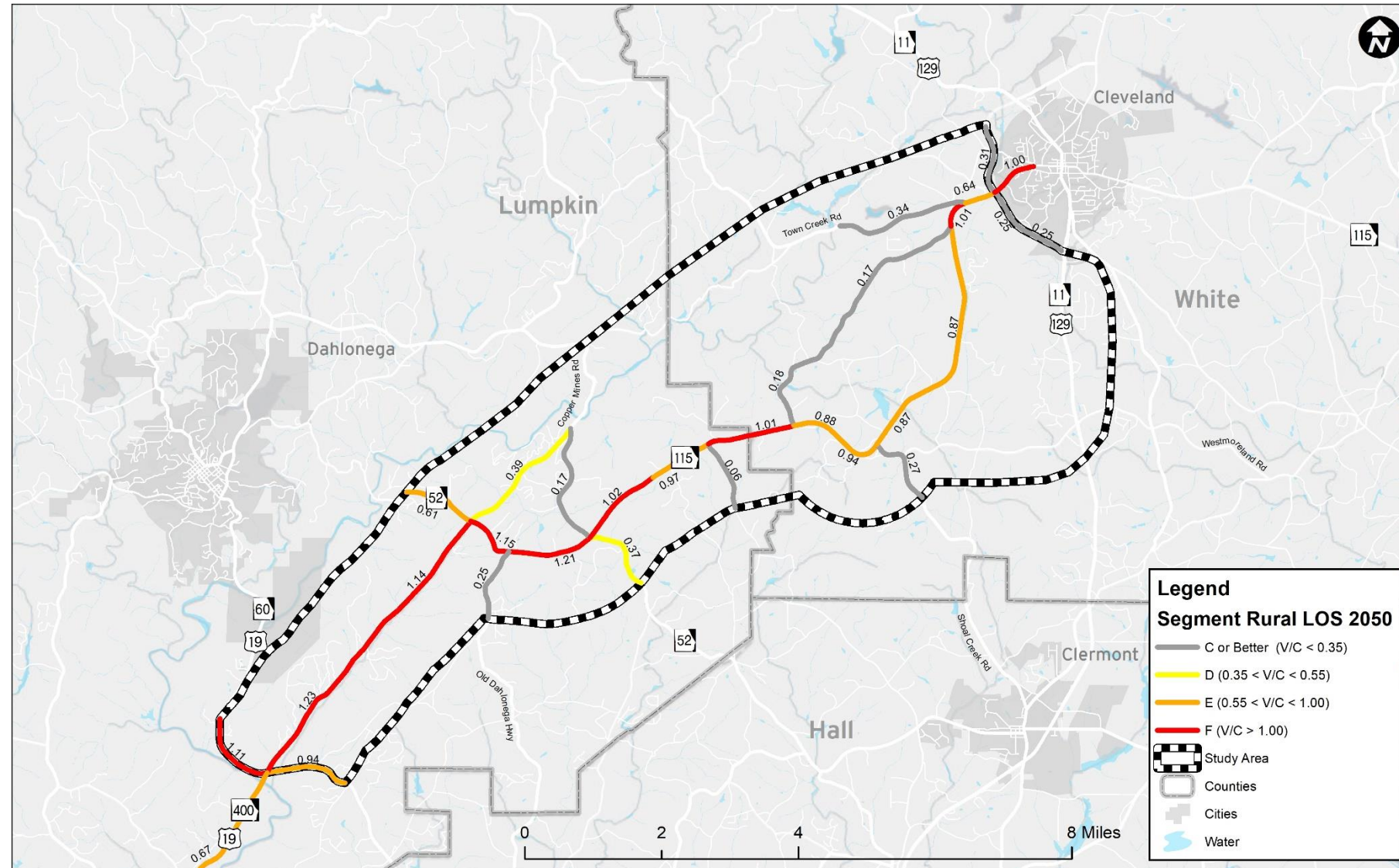
| Historical Traffic Volume Summary | | | | |
|-----------------------------------|----------|---------|---------|--------|
| Roadway | Stations | 15 year | 10 year | 5 year |
| SR 400 | 1 | 2.11% | 2.12% | 2.11% |
| SR 60 | 2 | NA | NA | 2.60% |
| SR 115 | 8 | NA | 1.46% | 2.87% |

| Annual No-Build Growth Rates | | |
|------------------------------|-----------------------|------------|
| Time Period | SR 115 & State Routes | Side Roads |
| 2019 to 2030 | 1.6% | 1.6% |
| 2030 to 2050 | 1.6% | 1.6% |

Future Conditions

2050 No-Build LOS

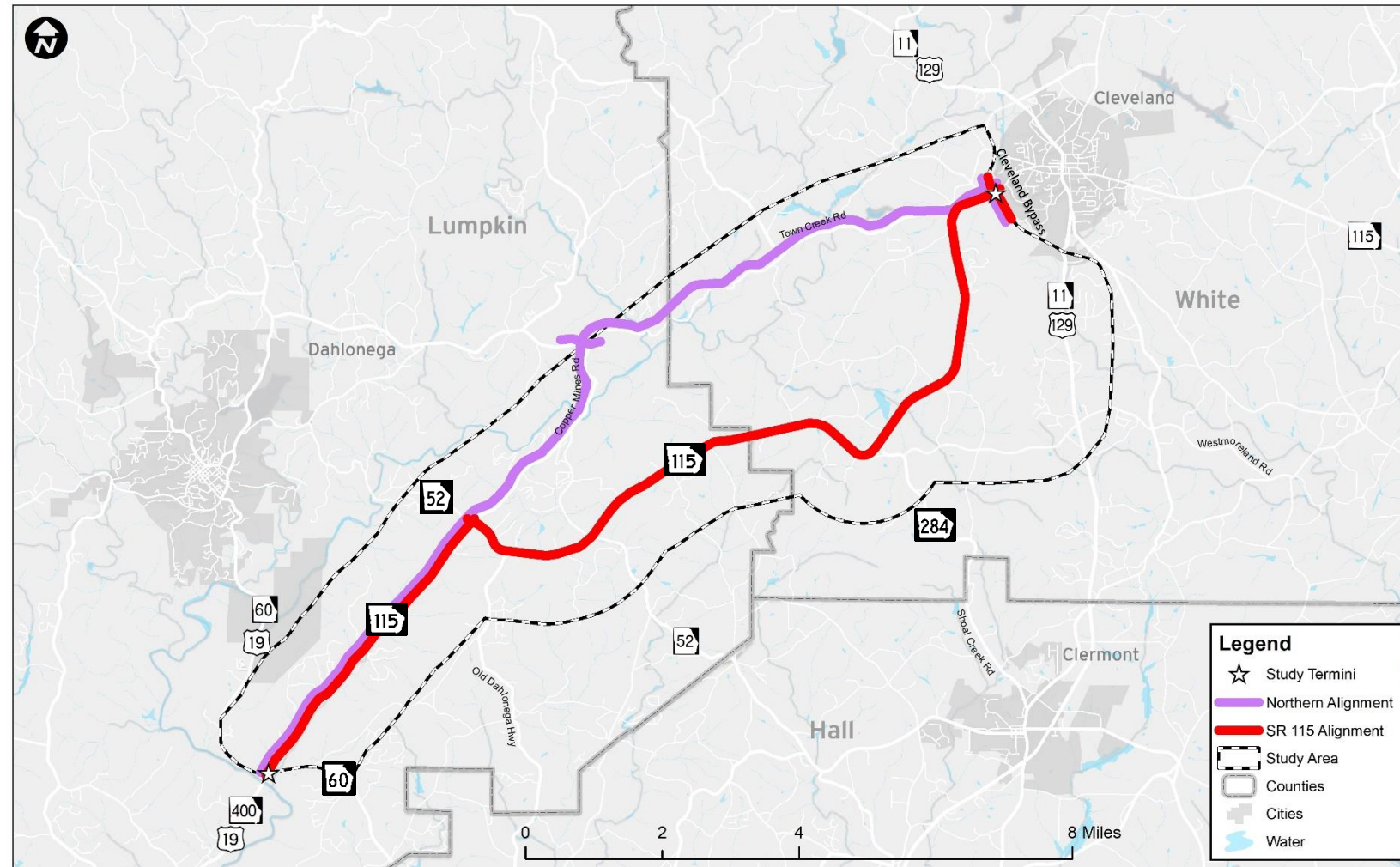
- 2019 Traffic
 - 7,400 – 11,100 vehicles per day
- 2030 Traffic
 - 9,100 – 13,300 vehicles per day
 - LOS E
- 2050 Traffic
 - 12,300 – 18,200 vehicles per day
 - LOS E and F



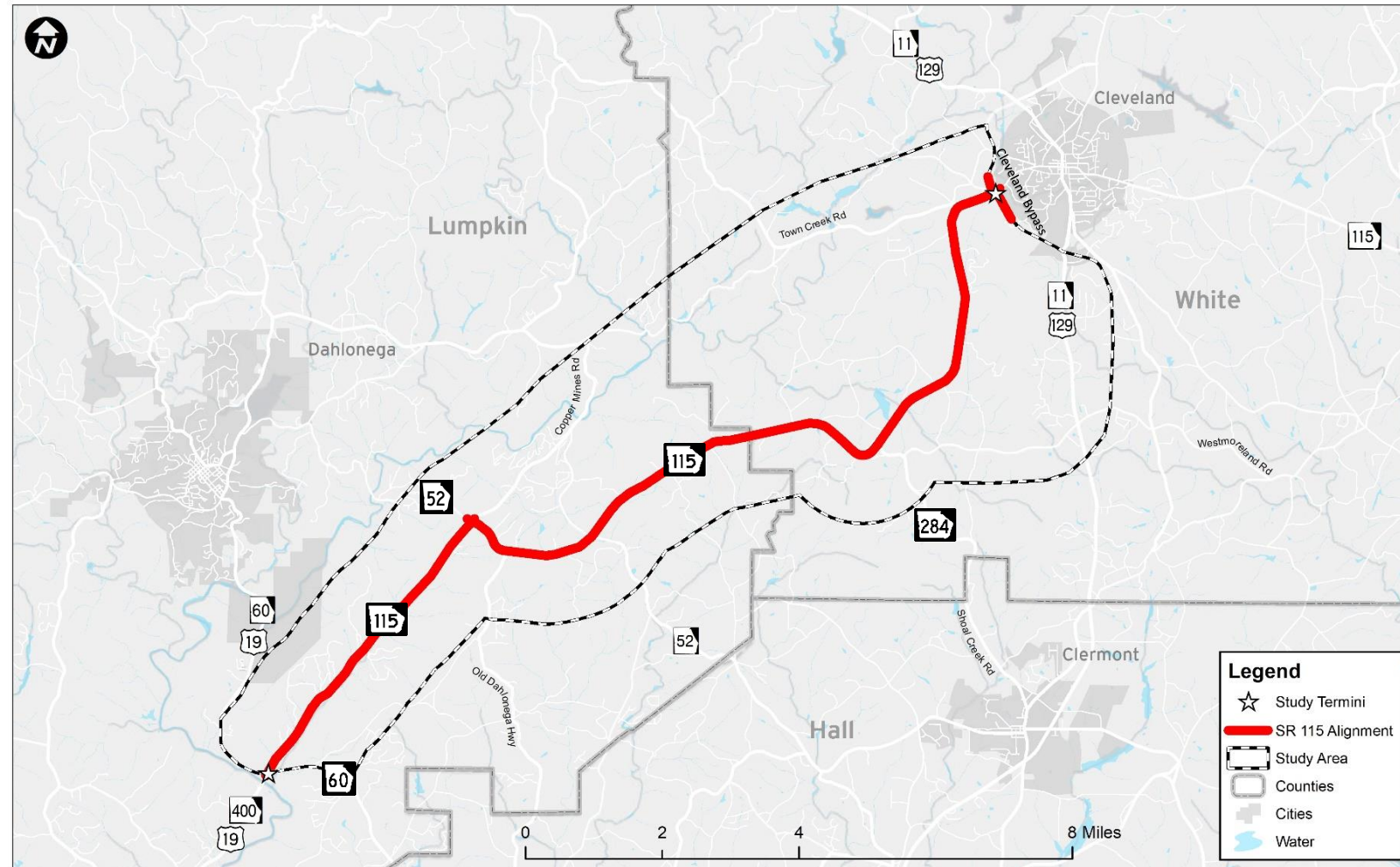
Development of Potential Improvements

Alignment Alternatives

- Widen Existing SR 115 Alignment
- Northern Alignment using:
 - Long Branch Rd
 - Copper Mines Rd
 - Cavender Creek Rd
 - Dugas Rd
 - Sandy Flats Rd
 - Town Creek Rd



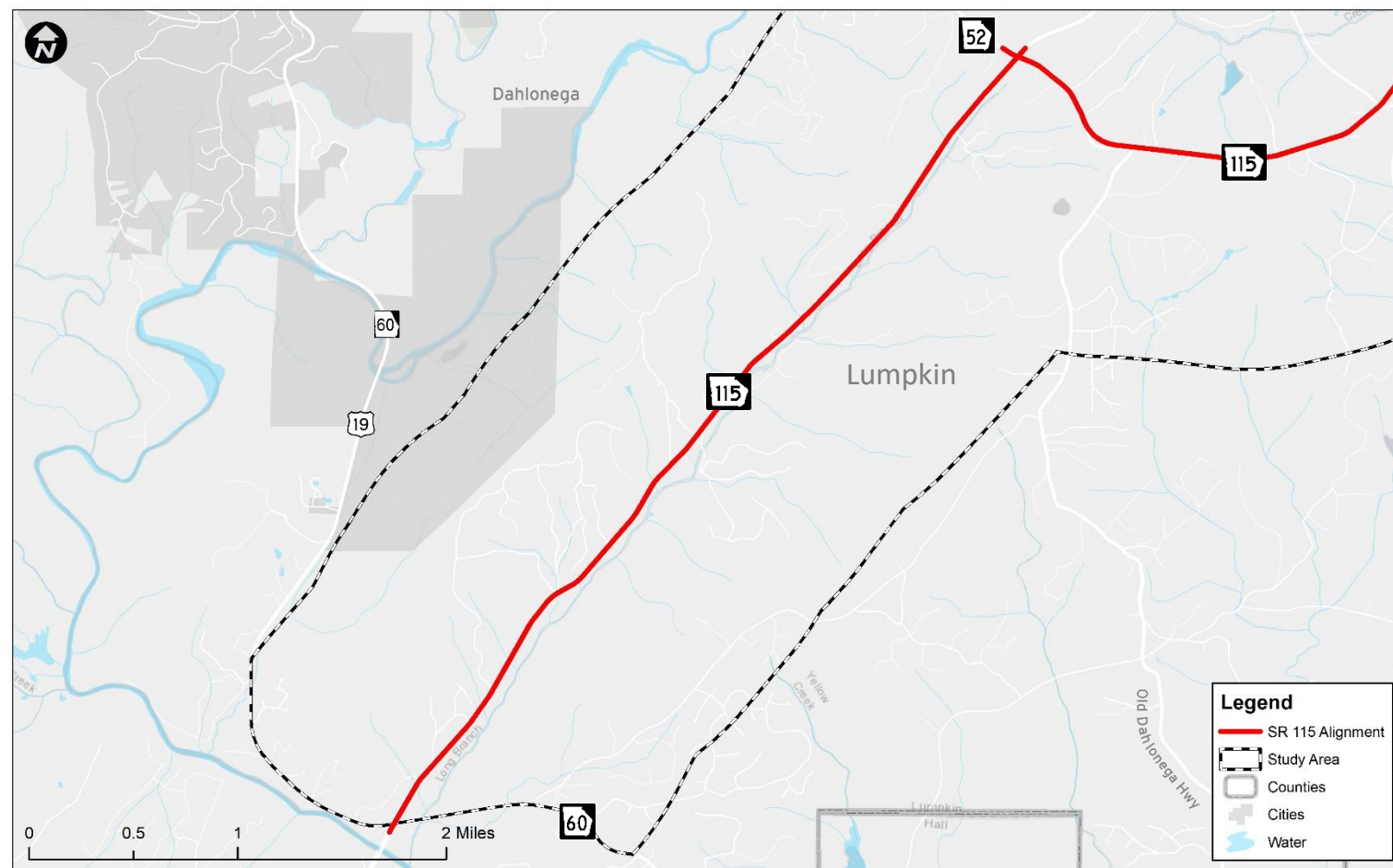
- 16.5-mile Corridor
- Principal Arterial (Rural)
- 55 mph Design Speed



Development of Potential Improvements

Widening Existing SR 115 Alignment

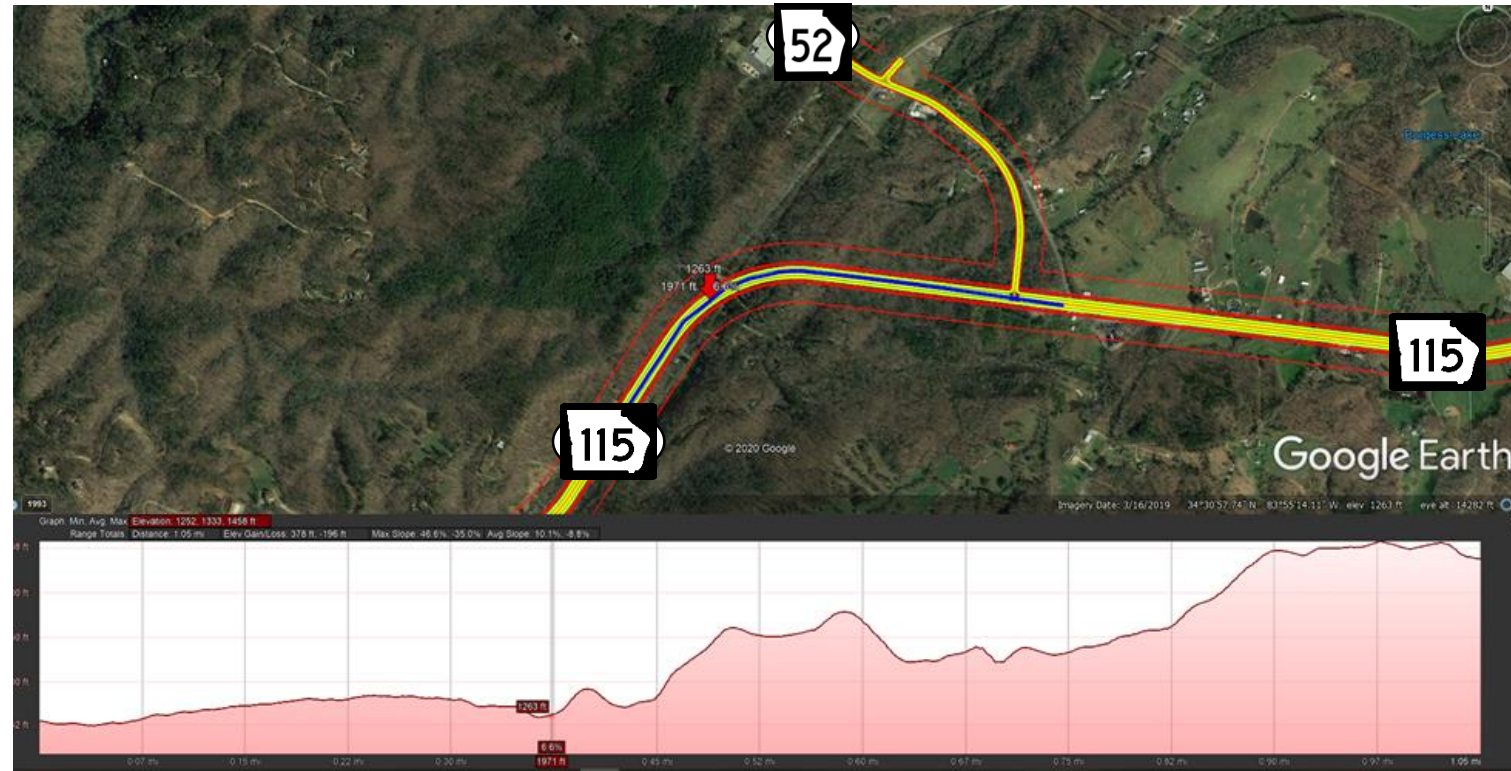
- SR 60 to SR 52
 - 24' raised median from SR 60 to Home Depot
 - 2:1 cut / fill slopes to minimize horizontal impacts
 - Significant cut wall heights in multiple locations
 - Long Branch floodplain encroaches roadway in multiple locations
 - 2-3 major culvert crossings anticipated
 - In-Stream impacts expected unless fill walls used
 - Stream buffer impacts expected even with walls



Development of Potential Improvements

Widening Existing SR 115 Alignment (Sub-Alternative)

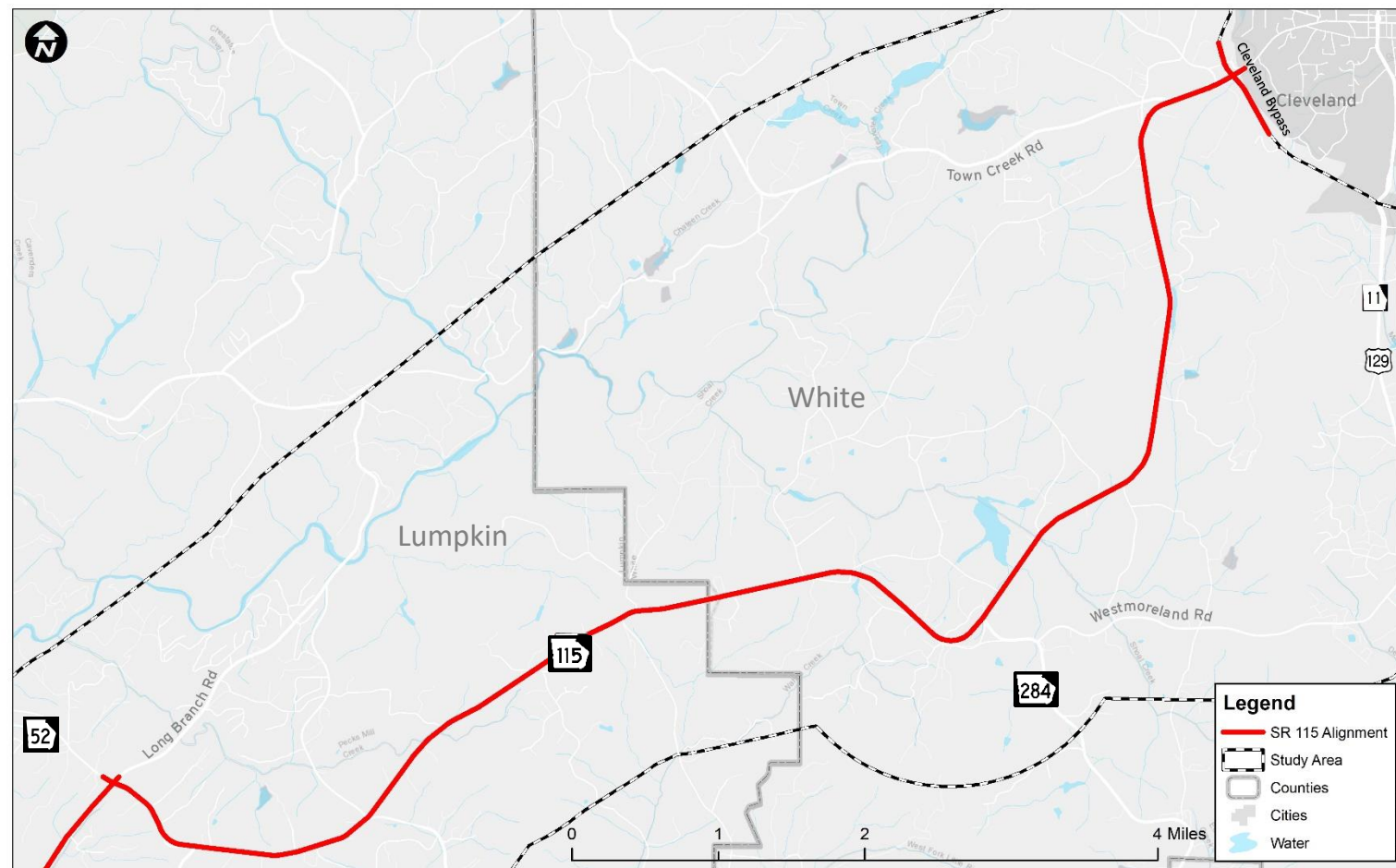
- SR 115 and SR 52
 - USGS topographic maps indicate excessive grades encumbering the goal of a 6% maximum grade
 - Maximum grade of 6% required by Design Policy Manual
 - Two stream crossings
 - Bridges likely needed



Development of Potential Improvements

Widening Existing SR 115 Alignment

- SR 52 to Cleveland Bypass
 - 2 horizontal curves require re-alignment
 - Walls likely to avoid taking structures/parking facilities
 - Access adjustments to several cemeteries
 - Trout stream near Cleveland Bypass
- Several Streams and crossings between SR 284 and Cleveland Bypass
 - Buffer impacts and/or walls
 - 3 major culverts (existing) or potential small bridge



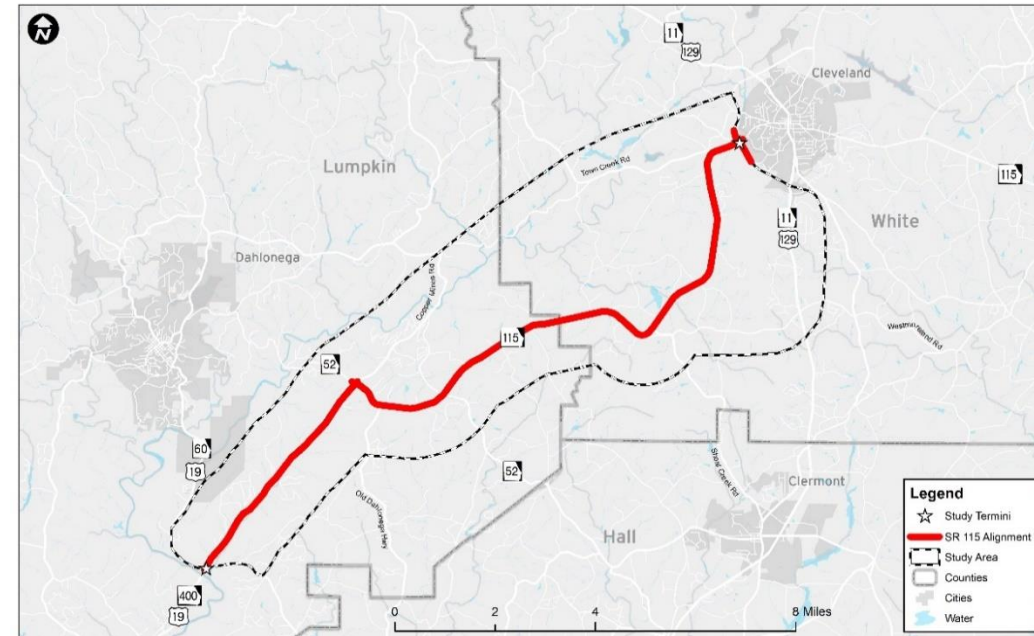
Development of Potential Improvements

Widening Existing SR 115 Alignment

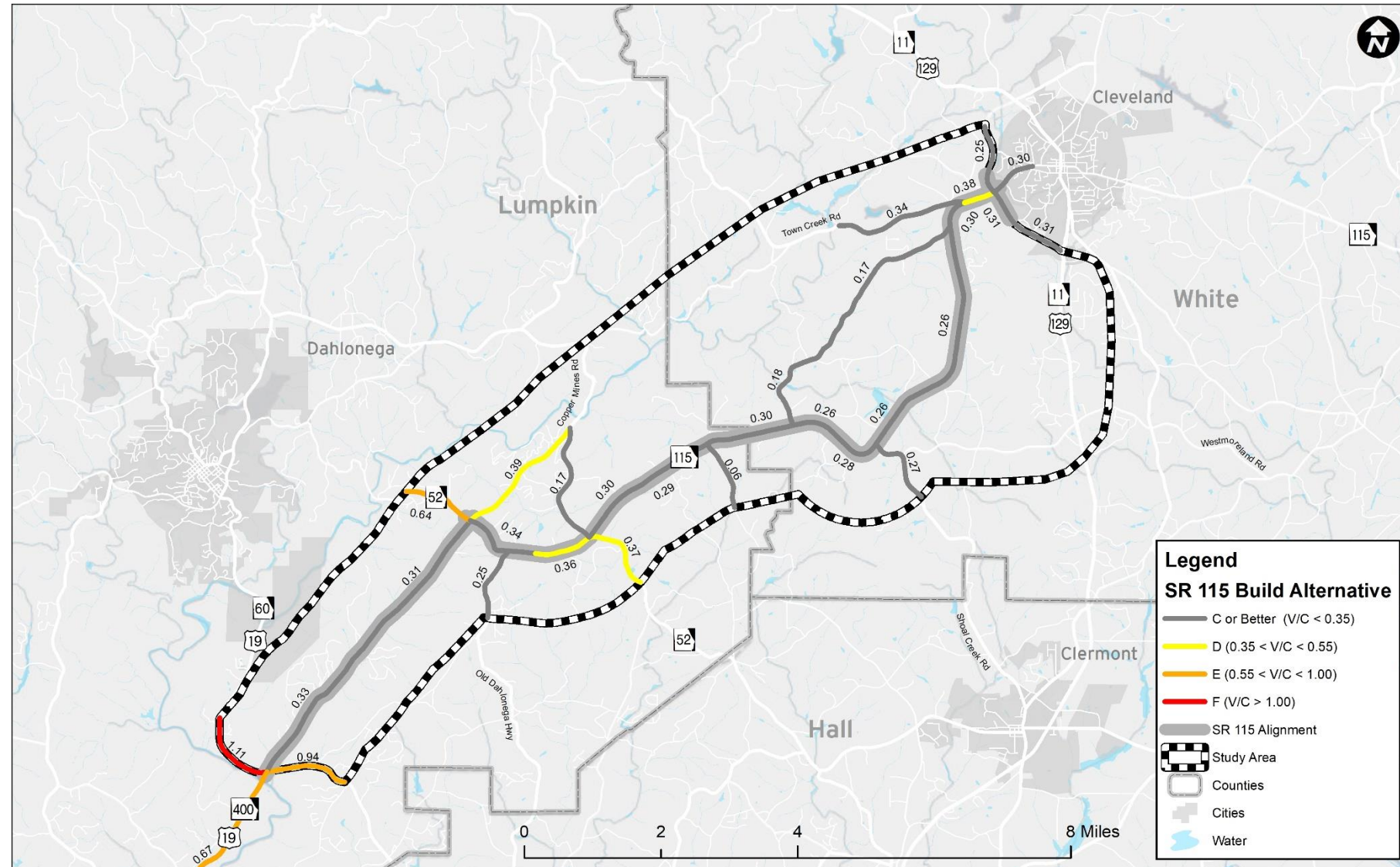
- 16.5 mile Corridor
 - \$15.4M / mile
 - Planning Level Costs
- Full Depth Asphalt for Entire Corridor

SR 115 Alignment Costs

| | |
|--|---------------|
| Design Cost (10% of Construction) | \$18,500,000 |
| ROW Cost (190 acres incl. displacement costs & other fees) | \$32,000,000 |
| Construction Cost (incl. 30% Contingency) | \$185,500,000 |
| Utility Cost (5% of Construction) | \$9,250,000 |
| CEI (5% of Construction) | \$9,250,000 |
| Total Cost | \$254,500,000 |



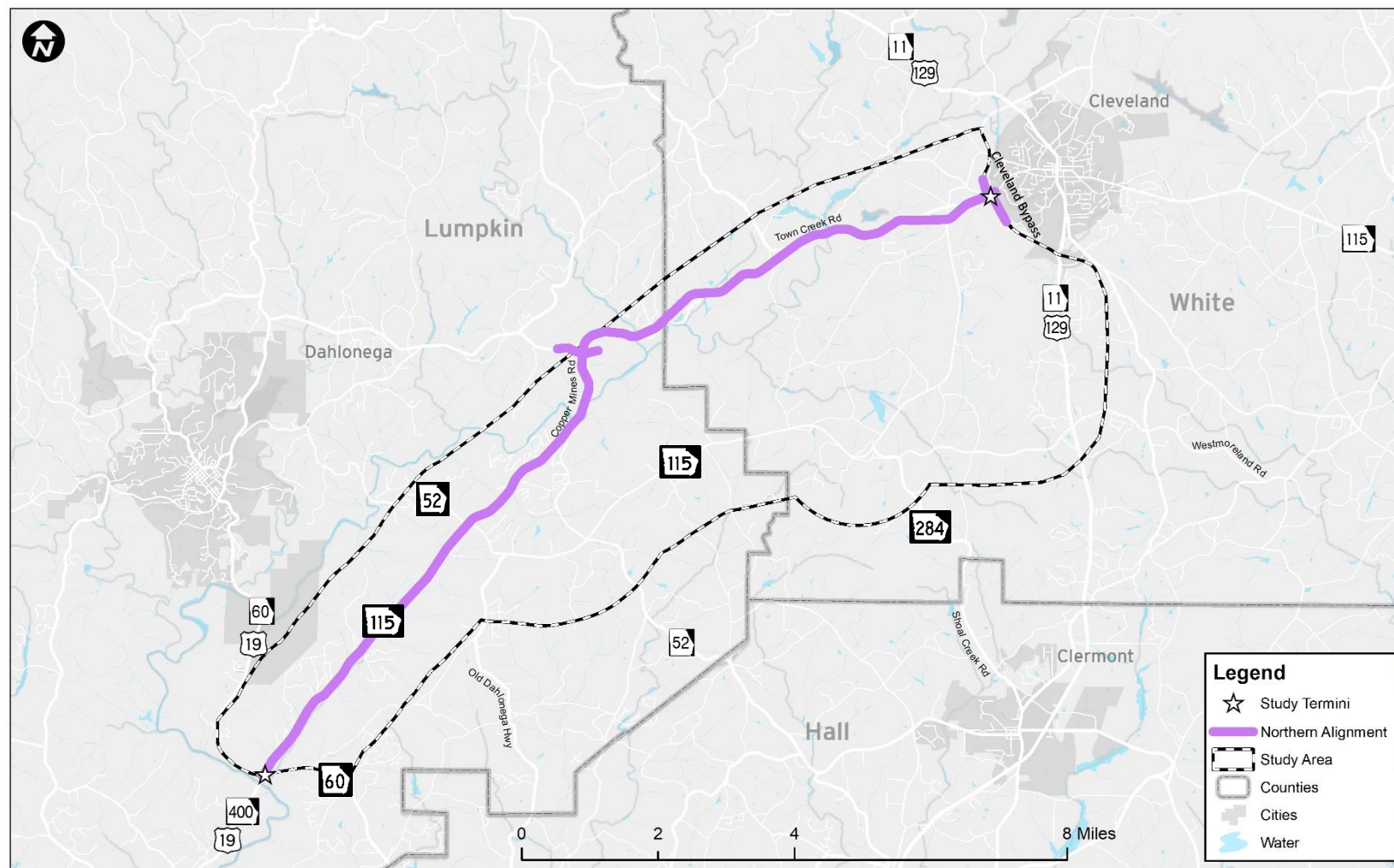
- SR 115 2050 Traffic
 - 12,300 – 18,200 vehicles per day
 - LOS C



Development of Potential Improvements

Northern Alignment

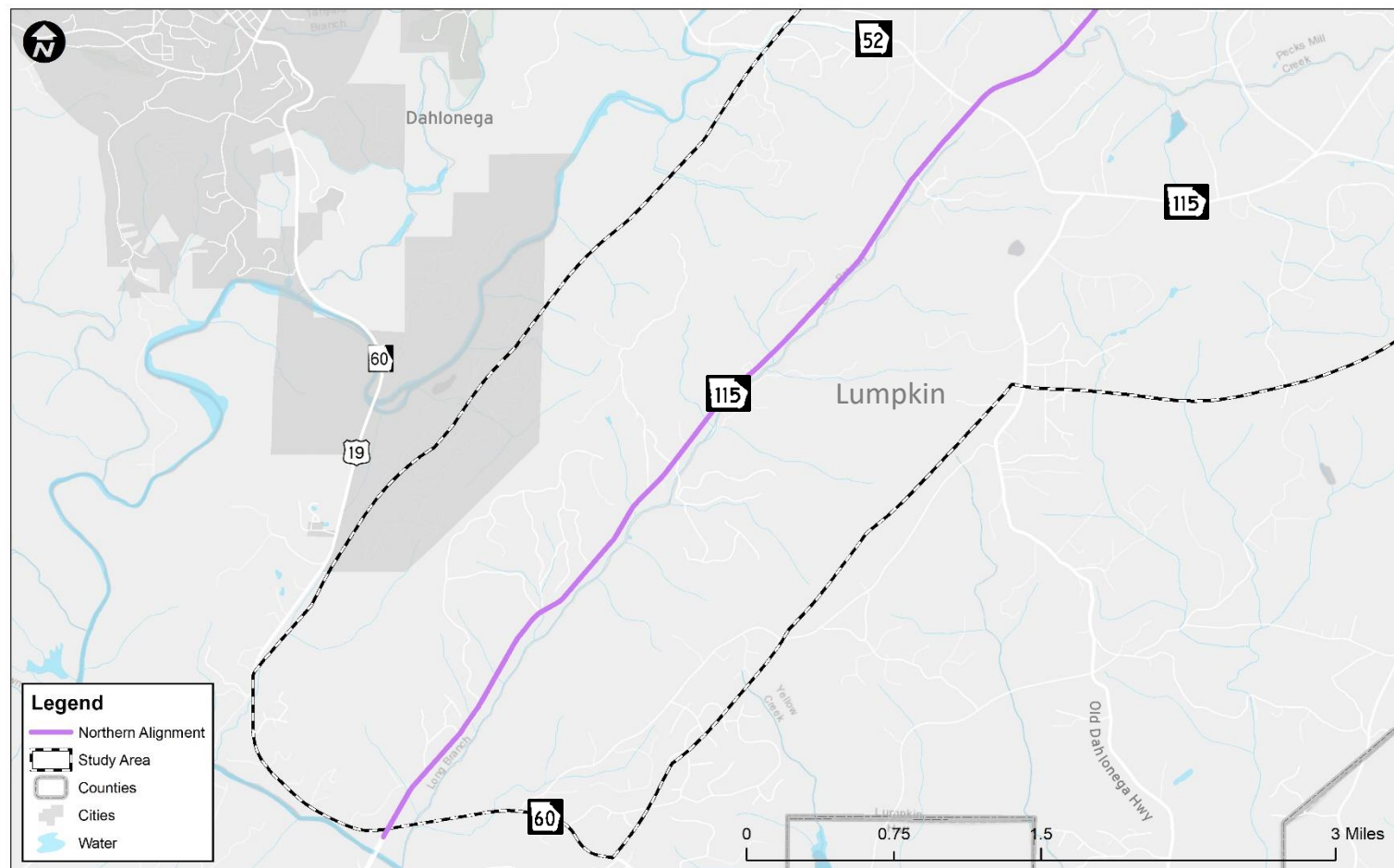
- 15 mile Corridor
- Principle Rural Arterial
- 55 MPH design speed
- 4.1 miles on New Location
- 3 Bridge Structures
 - 1,600' of Structures



Development of Potential Improvements

Northern Alignment

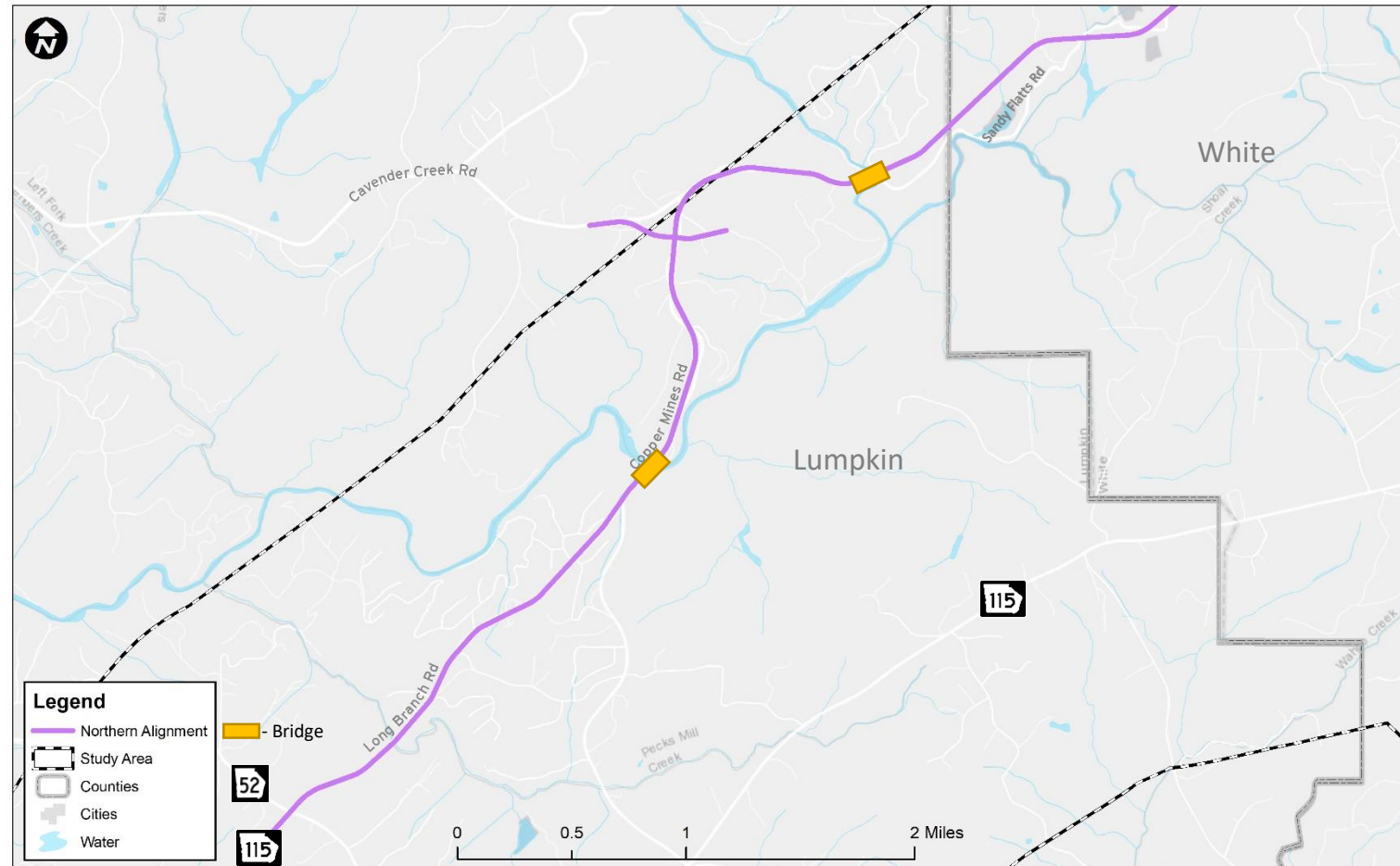
- SR 60 to SR 52
 - 24' raised median from SR 60 to Home Depot
 - 2:1 cut / fill slopes to minimize horizontal impacts
 - Significant cut wall heights in multiple locations
 - Long Branch floodplain encroaches roadway in multiple locations
 - 2-3 major culvert crossings anticipated
 - In-Stream impacts expected unless fill walls used
 - Stream buffer impacts expected even with walls



Development of Potential Improvements

Northern Alignment

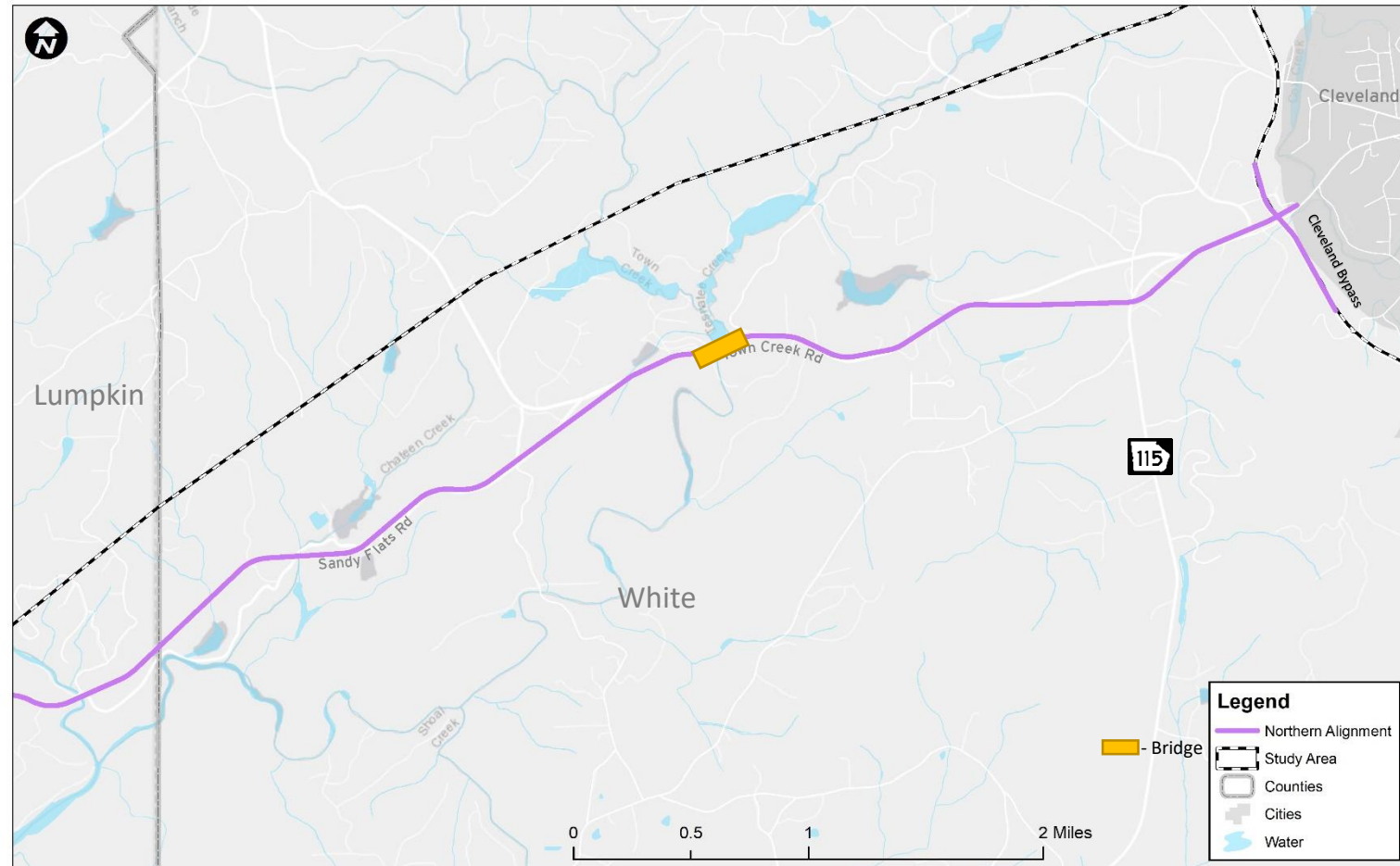
- SR 52 to Sandy Flats Rd
 - Realign Cavender Creek Rd and Lewis Grindle Rd at Copper Mines Rd
 - 2 Bridges
 - Used 2:1 cut/fill slopes and cut walls to minimize impacts
 - Stream buffer impacts
 - Open waters buffer impacts



Development of Potential Improvements

Northern Alignment

- Sandy Flats Rd to Cleveland Bypass
 - 1 Bridge
 - Realigned Town Creek Road
 - Avoided work in floodplain except at stream crossings
 - Trout stream near Cleveland Bypass
 - Not likely directly impacted by the alignment



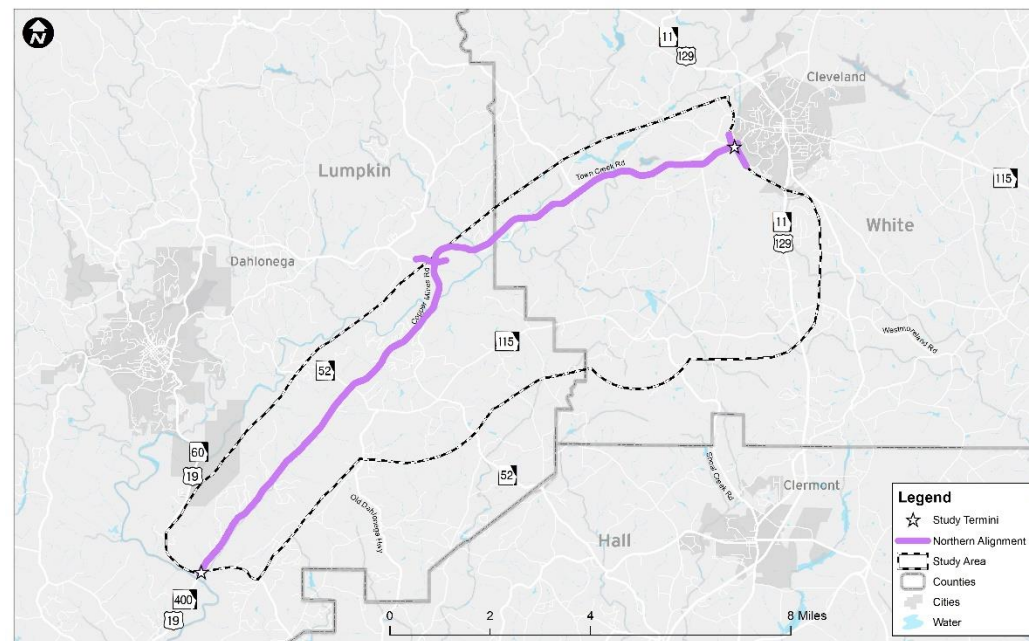
Development of Potential Improvements

Northern Alignment

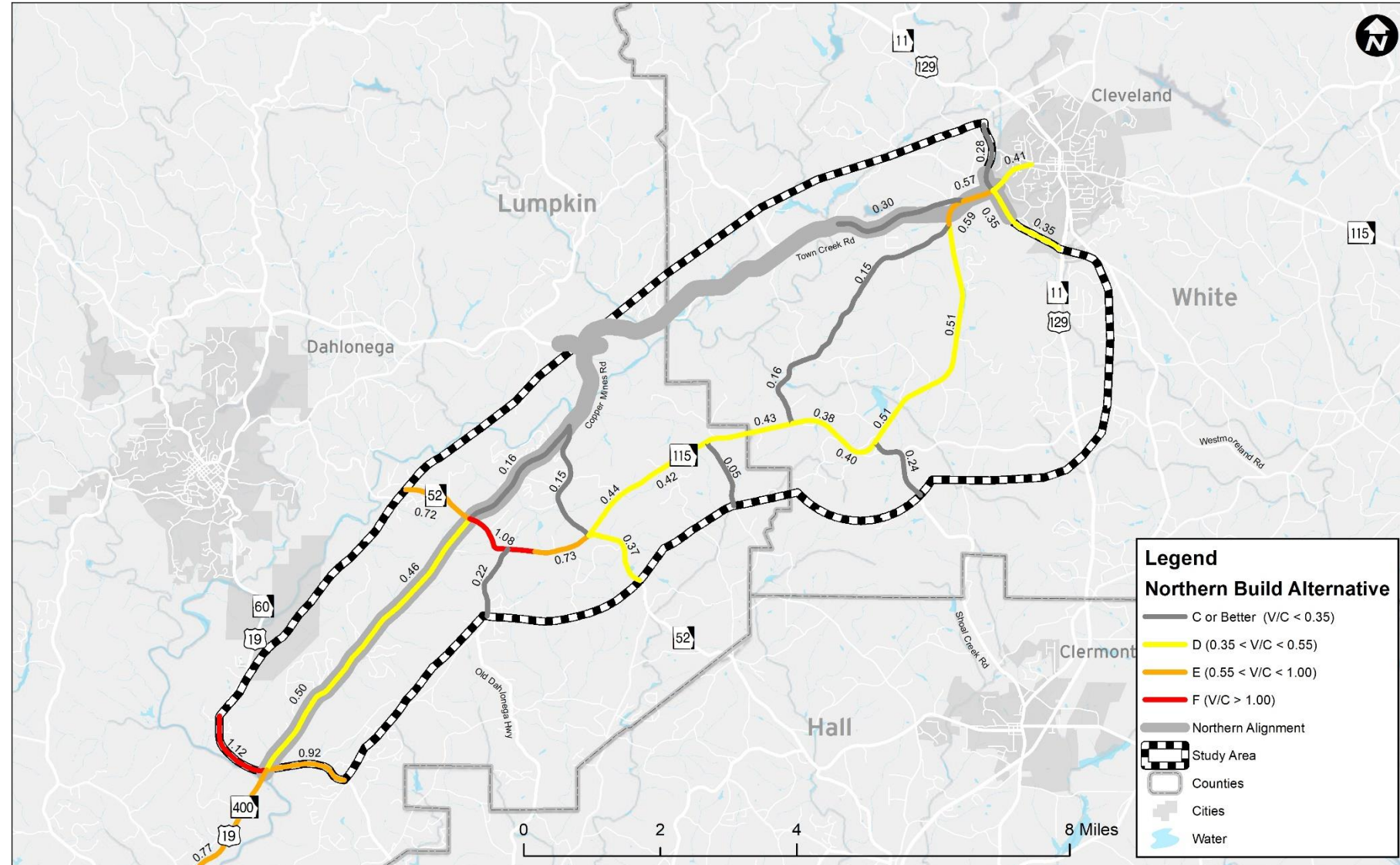
- 15-mile Corridor
 - \$20.1M / mile
 - Planning Level Costs
- Full Depth Asphalt for Entire Corridor

Northern Alignment Costs

| | |
|--|---------------|
| Design Cost (10% of Construction) | \$22,750,000 |
| ROW Cost (230 acres incl. displacement costs & other fees) | \$30,250,000 |
| Construction Cost (incl. 30% Contingency) | \$226,250,000 |
| Utility Cost (5% of Construction) | \$11,250,000 |
| CEI (5% of Construction) | \$11,250,000 |
| Total Cost | \$301,750,000 |



- SR 115
 - 5,400 – 15,400 vehicles per day
 - LOS C & D
- Northern Alignment
 - 5,000 – 8,000 vehicles per day
 - LOS C



Development of Potential Improvements

Environmental Assessment

- Acres of additional ROW / Easements
- National Register of Historic Places (NRHP)
- 50+ year old structures (GNAHRGIS)
- Cemeteries
- Tribal
- Archaeology
- Environmental Justice
- Community Resources
- Streams/Wetlands
- Protected Species
- Critical Habitat
- Permits / Mitigation

Development of Potential Improvements

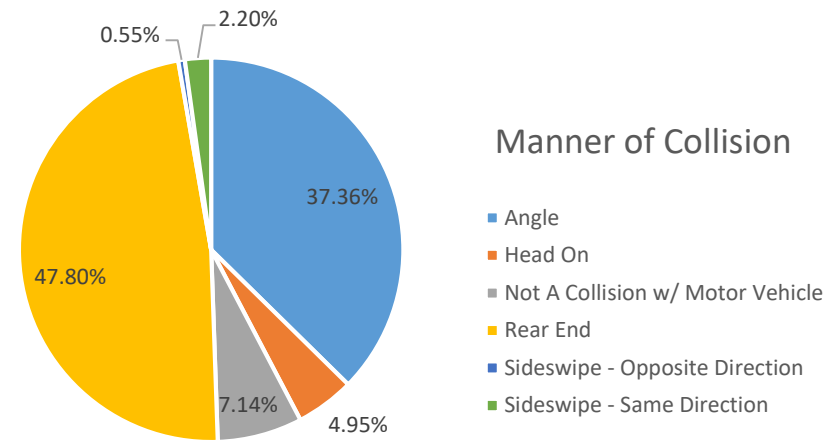
Travel Time Benefits

- Existing
 - Travel Time = 21 minutes
- No-Build
 - Travel Time = 32 minutes
- Widening Existing SR 115 Alignment
 - Travel Time = 20 minutes
 - 37% reduction in travel time
- Northern Alignment
 - Travel Time = 18 minutes
 - 44% reduction in travel time

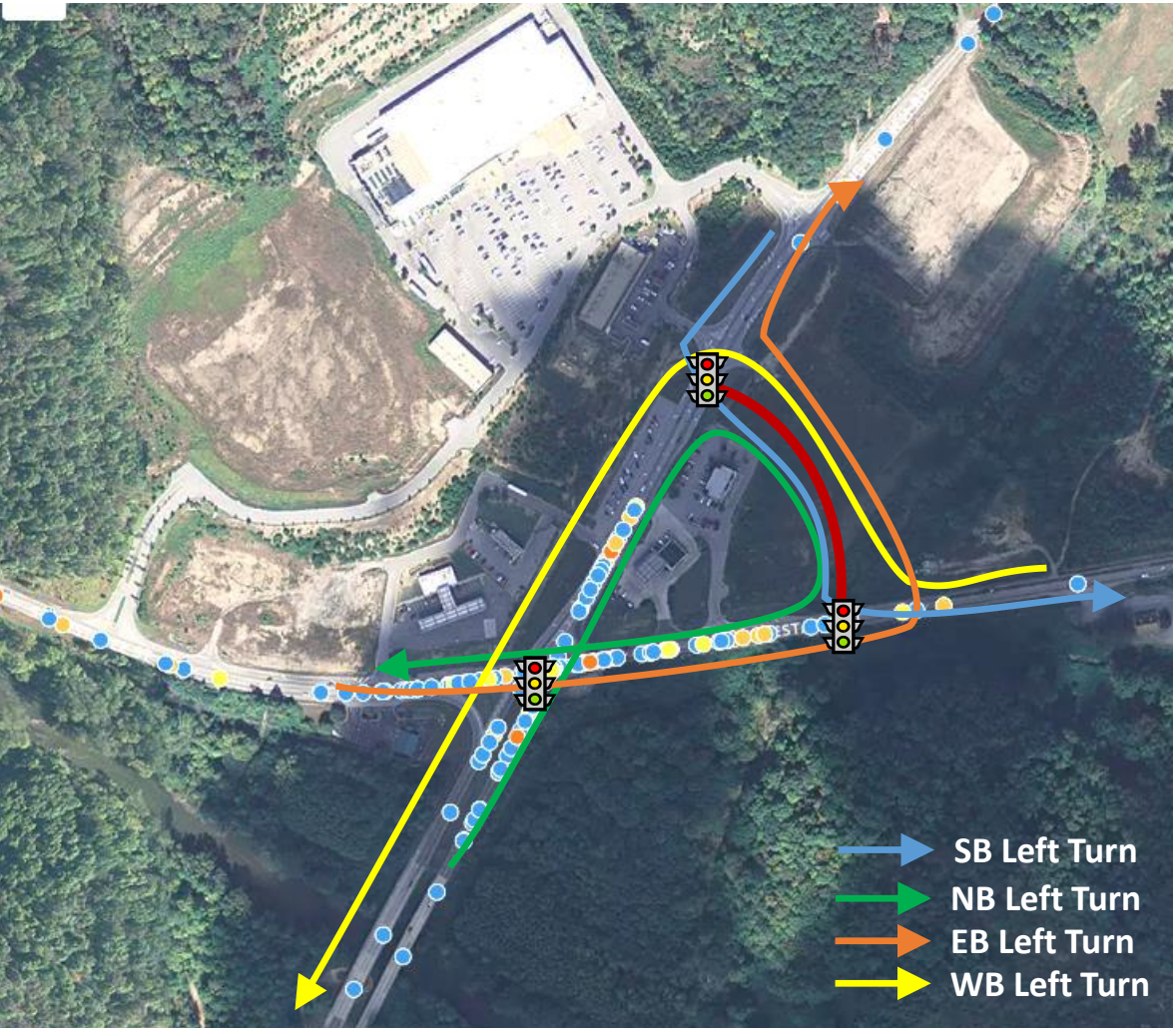
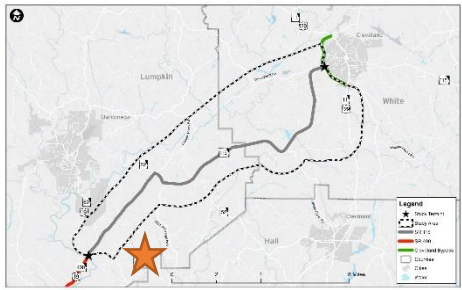
Development of Potential Improvements

Intersection Improvements

- SR 400 at SR 60



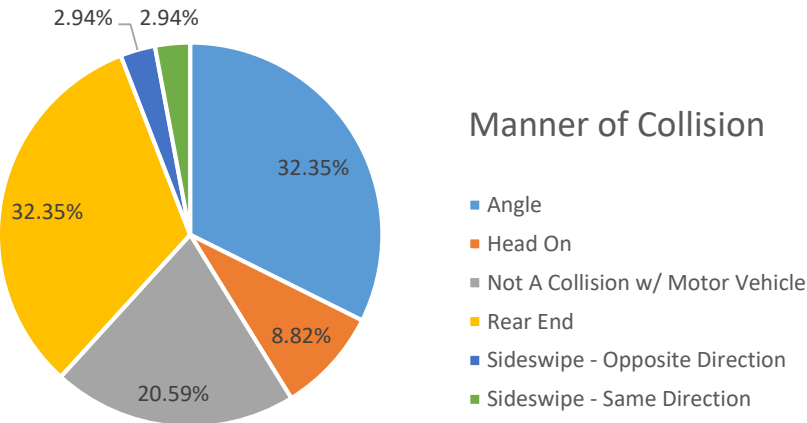
| | 2050 Delay (sec) / LOS | | | |
|------|------------------------|-------------|------------------|-----------------------|
| | No-Build | NE Quadrant | NB/WB Dual Lefts | Multi-lane Roundabout |
| AM | 173.4 / F | 21.3 / C | 106.9 / F | 185.8 / F |
| PM | 214.4 / F | 35.2 / D | 179.0 / F | 120.0 / F |
| Cost | - | \$1.46M | \$753k | \$2.15M |
| B/C | - | 79.4 | 30.6 | 23.9 |



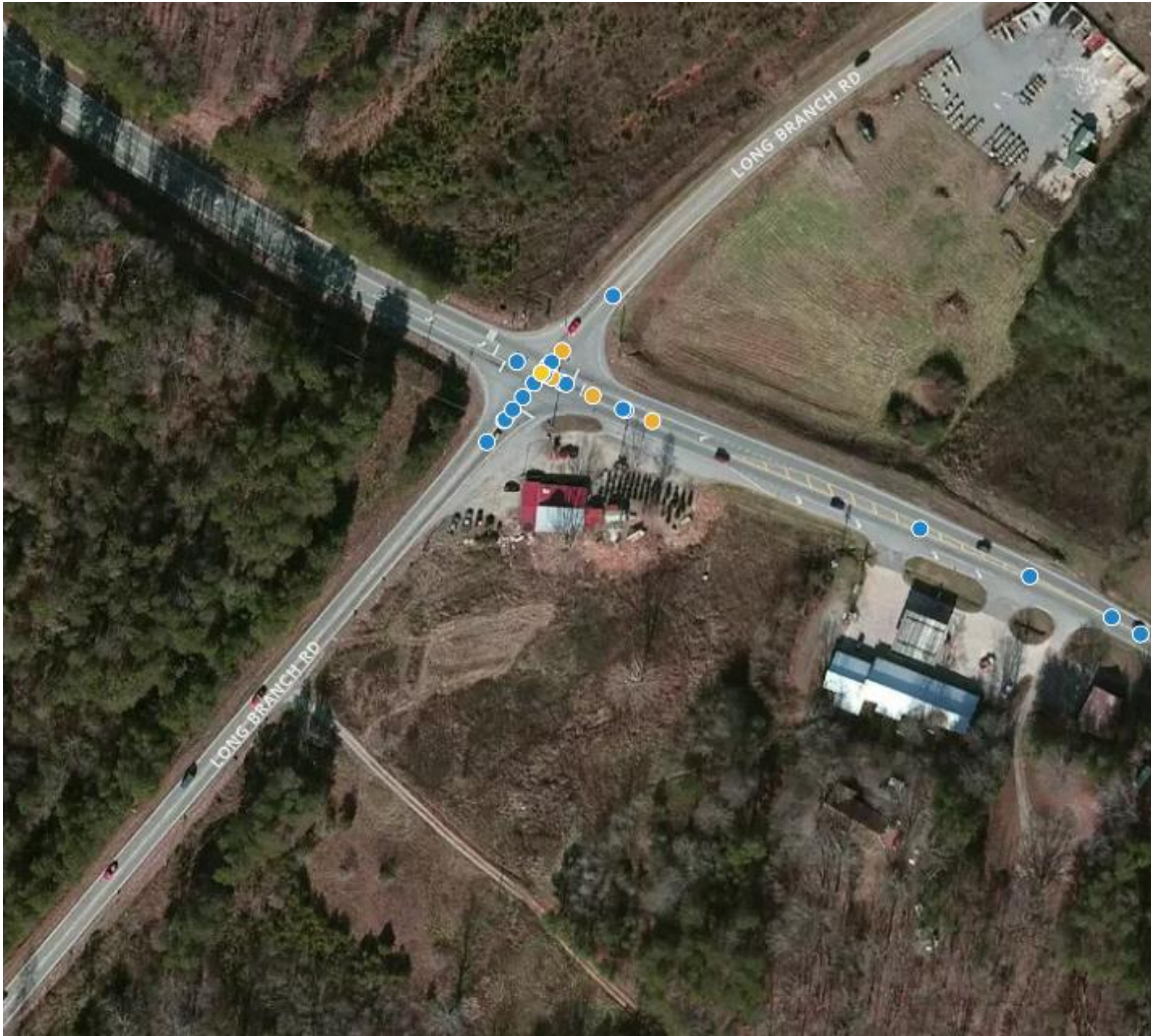
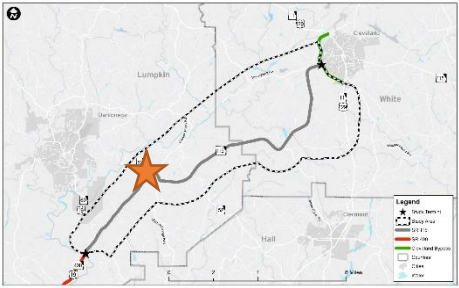
Development of Potential Improvements

Intersection Improvements

- SR 115 at SR 52 (Long Branch Rd)



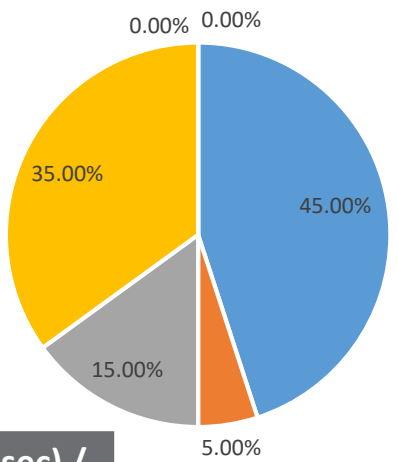
| | 2050 Delay (sec) / LOS | | | |
|------|------------------------|------------------------|---------------|-----------------------|
| | No-Build | Single Lane Roundabout | WB Dual Lefts | Multi-lane Roundabout |
| AM | 22.4 / C | 19.9 / C | 30.4 / C | 10.6 / B |
| PM | 64.8 / E | 18.5 / C | 58.4 / E | 11.3 / B |
| Cost | - | \$1.11M | \$266k | \$2.03M |
| B/C | - | 15.6 | 22.9 | 9.5 |



Development of Potential Improvements

Intersection Improvements

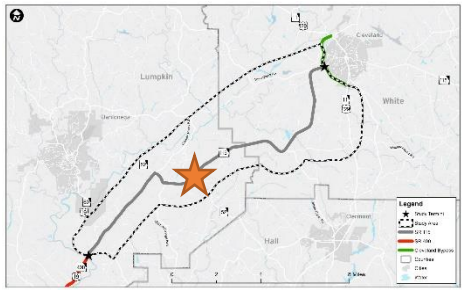
- SR 115 at SR 52 (Copper Mines Rd)



Manner of Collision

- Angle
- Head On
- Not A Collision w/ Motor Vehicle
- Rear End
- Sideswipe - Opposite Direction
- Sideswipe - Same Direction

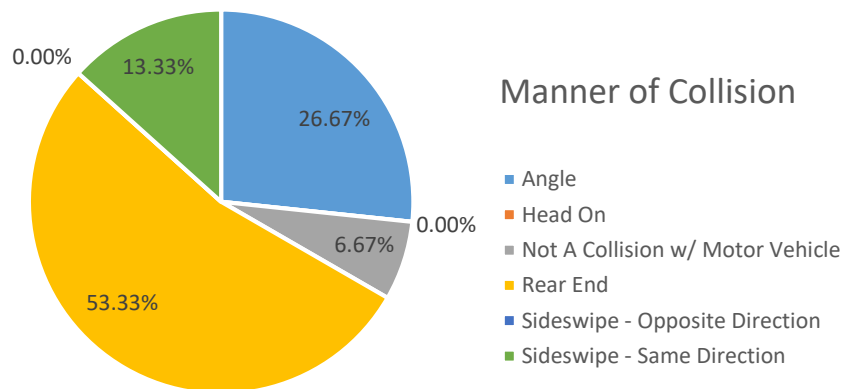
| | 2050 Delay (sec) / LOS |
|------|------------------------|
| | No-Build |
| AM | 11.8 / B |
| PM | 16.9 / C |
| Cost | - |
| B/C | - |



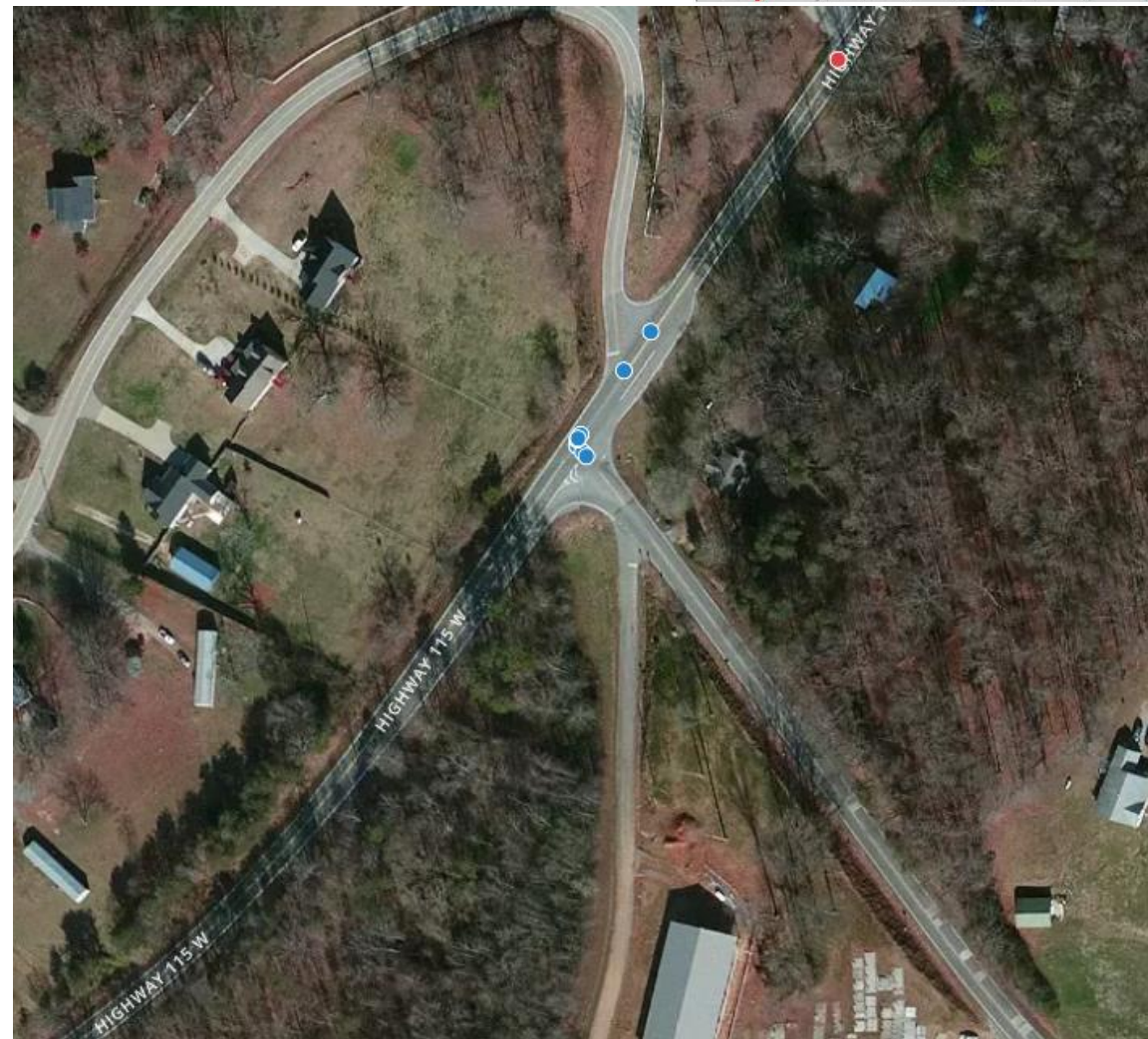
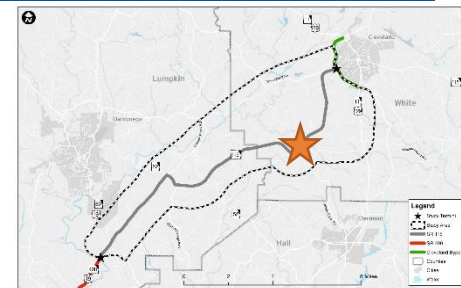
Development of Potential Improvements

Intersection Improvements

- SR 115 at SR 284



| | 2050 Delay (sec) / LOS | | | |
|------|------------------------|------------------------|-------------------------|-----------------------|
| | No-Build | Single Lane Roundabout | NW & WB Left Turn Lanes | High-T (Unsignalized) |
| AM | 26.1 / D | 7.4 / A | 42.2 / E | 15.3 / C |
| PM | 48.1 / E | 9.3 / A | 122.7 / F | 20.6 / C |
| Cost | - | \$1.16M | \$477k | \$429k |
| B/C | - | 7.7 | Negative | 25.8 |



Next Steps

- Develop Draft and Final Report

Contact Information

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